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The final report of the Committee on the Economic Status of the Profession of the American Association of University Professors. Includes data and discussion on adjustment of instructional salaries to living costs, decline in relative income, institutional differences, salary patterns in large State universities, retirement provisions, and enrollment and staff.

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Instructional Salaries in 39 Selected Colleges and Universities for the Academic Year 1959-60

HE7404

A Study by the Committee on the Economic Status of the Profession, the American Association of University Professors. Final Report[1]

In this series of biennial surveys of instructional salaries in selected institutions, we have had no tale of buoyant progress to unfold. Amid abounding prosperity in the nation at large, the struggle to restore the economic status of the profession—already gravely depressed by inflation when this series was begun in 1948—has been painfully slow and uphill. As late as two years ago, in our sixth report, we expressed anxious wonder about the future of higher education in America. The vast increase in the number of students about to seek admission to our colleges and universities was not counterbalanced by economic incentives calculated to enlist properly qualified young people in the teaching profession. The omens were not favorable: the relative decline in professorial income—still in sharp contrast, even in our selected group of institutions, to the great rise in real income per capita in the country; the ability and readiness of business and industry to draw off a disproportionate share of each year's crop of college graduates and to raid the trained staffs of colleges and universities with salary offers beyond compare, "consuming the seed corn of future harvests." The "stop and go" signs, we wrote, still flashed to the teaching profession the signal to contract rather than to expand. The prospect of recruiting enough people of energy and ability to maintain standards of excellence in the midst of massive enrollment did not appear assured.

The evidence of change in the past two years now permits a somewhat less somber view. For the first time in this series, we can report signs that allow a tentative and conditional measure of optimism. If the large upward adjustments of instructional salaries that have been made in our selected institutions—selected to represent good salary practices—are fairly typical of changes in the country generally, if similarly large adjustments can be extended in the near future, and if the inflationary tendencies of our age can be held in check, the profession may yet be able to retain sufficient seed corn of the quality needed for future harvests.

The increases made in instructional salaries in our selected institutions since our last survey substantially exceed those of any preceding biennium in our records. These increases have been of such magnitude as to improve appreciably the relative economic status of the instructional staffs. Moreover, while raising the salary level of each rank in every institution, the amounts have been distributed among the several ranks with evident thought for the restoration of sounder salary structures. In most of these institutions, adjustments for the upper ranks had been somewhat skimped, perhaps in order that the limited funds might be applied to the beginning ranks where they seemed most needed for recruitment. In the recent biennium, however, the percentage rate of salary increases has been generally larger for the upper ranks than for the lower, and the dollar amount of the increases has been invariably larger for the upper ranks. As a result, and despite further rise in living costs during the period, salaries now at most of the surveyed privately controlled institutions—after nearly twenty years of deficiency—are approaching parity in purchasing power with the salaries of 1939-40 in the same set of institutions. Indeed, several groups of these privately controlled institutions and the group of selected state universities have achieved more than that parity; their salaries show gains, even for the upper ranks, beyond the rise in living costs. In the average for all ranks combined in the privately controlled institutions for which we have comparable data for 1939-40, we can now, for the first time, report a slight gain beyond the cost of living adjustment. Furthermore, by including at current value the pension provisions at higher rates now made by most of these institutions, we find somewhat stronger evidence of progress toward placing the profession on a competitive level befitting its significant role in our nation.

Improvements by these measurements are as yet too modest, in relation to the gains by competing occupations, to engender any degree of complacency. But viewed as

[1] The Preliminary Report in this study, with detailed tables setting forth current salary conditions in the 39 institutions, was published in the Winter Issue of the *AAUP Bulletin*, Vol. 45, No. 4, 1959, pp. 479-492.

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evidence of a rising head of effort to rehabilitate the economic status of the profession and to enable it to compete effectively for able personnel, these changes are hopeful auguries that standards of quality in higher education may be maintained.

II. Adjustment of Salaries to Living Costs

In measuring the change that has taken place in our selected institutions, we shall first present aggregated data, rank by rank, and for all ranks combined, as weighted mean salaries. These are base salaries in the sense that they are taken before withholding taxes or other deductions, and that they do not include institutional contributions to retirement annuities or other so-called" fringe benefits."[3]

In Table 1, we compare the salaries paid in 1957-58 and in 1959-60 on the 9-10 months basis in thirty-three privately controlled institutions as one group, and in five large state universities as another. The percentage rates of gain shown in this table in the latest biennium indicate quite clearly the stronger emphasis given during the period to improving salary scales in the upper ranks. In the privately controlled institutions, the percentage rate of gain for professors is notably larger then for any of the other three ranks. In the five state universities, the percentage rates of improvement are much smaller in this biennium than for the privately controlled institutions, but the latter had lagged more in earlier periods (see also Table 2), and the dollar amounts paid in each rank in the two groups of institutions are now more comparable. In the state universities, the recent increases have been more strongly concentrated in the three upper ranks. In this group, the percentage gain for instructors hardly amounts to the equivalent of the rise in the cost of living over this biennium. The values in the category of "all ranks combined" reflect the changes in proportions as well as in the salary scales of the four academic ranks, and it is this factor which accounts, in both groups of institutions, for the relatively larger gains shown in these weighted means than those shown by a simple average of the ranks as such.

TABLE 1—*Weighted Mean Salaries of the Four Academic Ranks and of All Ranks Combined in 1957–58 and 1959–60*

38 Selected Institutions

(9–10 months basis only)

	33 Privately Controlled			*5 Large State Universities*		
	1957–58	*1959–60*	*Gain %*	*1957–58*	*1959–60*	*Gain %*
Professors	$10,276	$11,921	16.0	$11,259	$12,055	7.1
Associate Professors	7,463	8,351	11.9	8,039	8,695	8.2
Assistant Professors	5,912	6,602	11.7	6,396	6,949	8.6
Instructors	4,665	5,290	13.4	5,137	5,290	3.0
All Ranks Combined	7,551	8,696	15.2	8,161	8,777	7.5

Source: Calculated from data in Appendix Table I.

In Table 2, the relative purchasing power of the mean salaries of 1959-60 is shown in terms of 1939-40 prices. For the privately controlled group, the comparison is limited to the twenty-eight institutions for which we have consonant data for 1939-40. In calculating the relative purchasing power of 1959-60 salaries, the Consumer Price Index prepared by the Bureau of Labor Statistics was used. By September, 1959, the index had risen to 125.2 (1947-49 = 100), a rise of 3.4 per cent since September, 1957. Reduced to 1939-40 base, the index would read 209.9 or a rise of almost 110 per cent since that pre-war year.

From these calculations, there still appears to be a significant deficiency in purchasing power in the upper ranks of the twenty-eight privately controlled institutions taken as a whole. Only in the rank of instructor, and in the average of all ranks combined where increases in salaries of instructors and some gains in the proportions of staff in the upper ranks influence the results, has the weighted mean salary risen more than consumer prices; in the average of all ranks combined the margin is very small. It is, indeed, too narrow in the privately controlled institutions to indicate that this sector of the profession is yet receiving any significant share in the great growth in national income per capita during these two decades. This aspect will be considered in more detail later in this report. However, in the aggregate, the upper three ranks in the sample of privately controlled institutions—far from gaining any share of the real income growth in the country—have not even recovered the levels of purchasing power those ranks enjoyed in 1939-40. Moreover, there is now relatively less salary difference separating the beginning instructor from the mature teacher and scholar (see also Table 3). In the five large state universities, mean salaries

[3] Thirty-nine of the 41 selected institutions responded at a very busy season of the academic year in time for inclusion in the report. They are as follows: Amherst College, Bowdoin College, Brown University, Bryn Mawr College, California Institute of Technology, University of California, Carleton College, Columbia University, Cornell University (Endowed Colleges), Dartmouth College, Duke University, Emory University, Harvard University (Arts and Sciences), Haverford College, University of Illinois, The Johns Hopkins University, Massachusetts Institute of Technology, University of Michigan, Mills College, University of Minnesota, Northwestern University, Oberlin College, University of Pennsylvania, Pomona College, Princeton University, Reed College, Rice Institute, University of Rochester, Stanford University, Swarthmore College, Vanderbilt University, Vassar College, Wabash College, Washington University, Wellesley College, Wesleyan University, Williams College, University of Wisconsin, Yale University (Arts and Sciences). Of the other two institutions invited to participate, one reported too late for inclusion, and the second expressed regret that because of special local circumstances it was unable to respond this year.

[3] For each regional size- or type-group of institutions, the number of persons and the weighted mean base salaries in each rank for each report year, 1939-40 through 1959-60, are shown in Appendix Table I. Weighted mean salaries, including institutional contributions to retirement funds, and the percentage of base salaries represented by these contributions are shown in Appendix Table II for each rank and group for three report years, 1939-40 to 1959-60.

TABLE 2—*Weighted Mean Salaries of the Four Academic Ranks and of All Ranks Combined in 1939–1940 and 1959–60 in Relation to 1939–40 Purchasing Power*

33 Institutions

(9–10 months basis only)

	Professors		*Associate Professors*		*Assistant Professors*		*Instructors*		*All Ranks*	
	Mean Base Salary	*Relative Purchasing Power*	*Mean Base Salary*	*Relative Purchasing Power*	*Mean Base Salary*	*Relative Purchasing Power*	*Mean Base Salary*	*Relative Purchasing Power*	*Mean Base Salary*	*Relative Purchasing Power*
28 Privately Controlled Institutions										
1939–40	$ 5,878	100.0	$4,131	100.0	$3,189	100.0	$2,173	100.0	$4,015	100.0
1959–60	11,615	94.1	8,300	95.7	6,536	97.6	5,239	114.9	8,533	101.3
5 Large State Universities										
1939–40	$ 5,162	100.0	$3,624	100.0	$2,940	100.0	$2,187	100.0	$3,551	100.0
1959–60	12,055	111.4	8,695	114.3	6,949	112.6	5,290	115.2	8,777	117.8
33 Privately Controlled and Large State Universities Combined										
1939–40	$ 5,591	100.0	$3,905	100.0	$3,088	100.0	$2,179	100.0	$3,819	100.0
1959–60	11,816	100.7	8,496	103.7	6,732	103.9	5,264	115.1	8,642	107.2

Sources: Salaries calculated from data in Appendix Table I; relative purchasing power estimated by use of the Consumer Price Index, Bureau of Labor Statistics, taking September, 1959 (209.9, 1939–40=100) for the academic year 1959–60.

in all ranks show gains in relative purchasing power. But the fact that salaries in their upper three ranks were significantly lower than in the 28 privately controlled institutions in 1939-40 indicates the need for caution. Salaries in these state universities may have been still unduly depressed in 1939-40 as a result of severe budget cuts made earlier in the thirties. For this reason, we may be on sounder ground to take the weighted mean salaries of all thirty-three institutions combined as a frame of reference. By this aggregation, the top rank about breaks even on purchasing power, and the other two professorial ranks show extremely modest gains. For instructors, the gain is more significant. It is interesting that both the initial salaries and the rate of gain in this rank were closely comparable for these two groups.

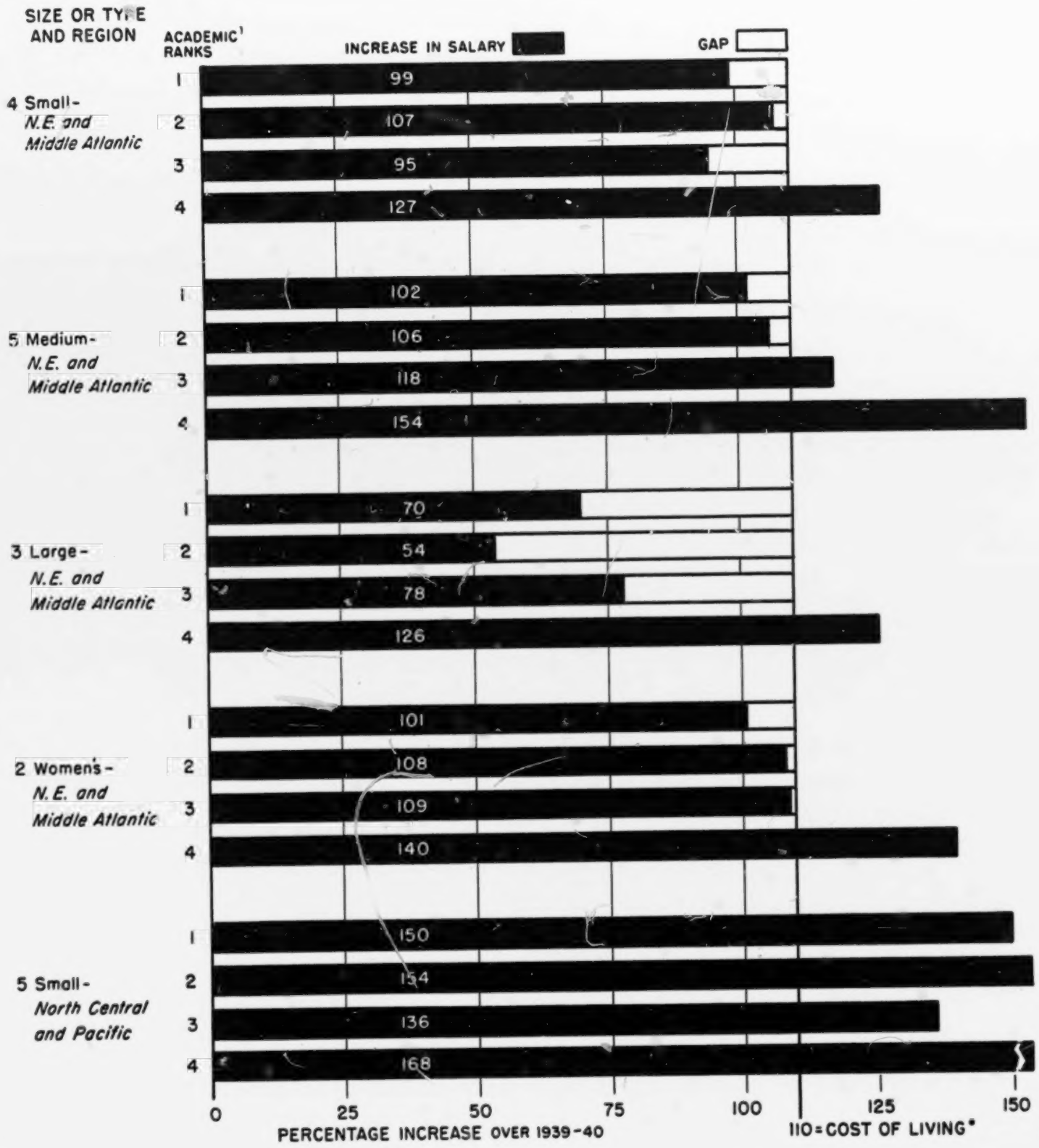
The aggregations in Table 2 supply a quick over-all measure of trends, but they obscure many differences in salary levels and in rates of development. Some of these variations can be shown in graphic form for the regional size and type groups in Charts 1 and 2, and they will be indicated later for the changes in median salaries, rank by rank, and by institution (in coded form) in Charts 3 to 9. In Chart 1, each academic rank in each regional size or type group of institutions has a bar which reaches from the base line 0, representing the weighted mean salary of the rank in 1939-40, to or beyond the line 110, representing the increase in the cost of living from 1939 to September, 1959. The percentage increase in the weighted mean salary from 1939-40 to 1959-60 is indicated by the solid black section of the bar. Deficiencies in purchasing power, as measured by the mean salaries of this group-rank in 1939-40 against the increase of 110 per cent in consumer prices, are represented by the blank section of the bar. Such blanks appear in the bars for the upper ranks in the Eastern group of institutions, in some cases still in surprisingly large degree, and it is the influence of these groups that produced the blank spaces in the bars for the three professorial ranks in the twenty-eight privately controlled institutions combined.

The brighter aspect of the data shown in Chart 1 is the number of rank bars that now pass the cost of living line. Twenty-five of the thirty-six group-rank bars now show gains of some degree beyond the cost of living adjustment. In this respect, the change during this latest biennium has been very large. Two years ago, twenty-two out of thirty-six group-ranks failed to reach the cost of living line, then 103. Today, only half that number fail to reach the line that has meanwhile advanced to 110, and in all these cases the gaps are much narrower. Whereas, in 1957-58, only fourteen group-ranks, half of them instructors, had made any headway toward increasing their real income and so meeting the competitive income advantages that had accrued to other occupations or professions over the period, today twenty-five group-ranks have made gains of some degree beyond the cost of living line. In many cases, especially in the upper ranks, the gains of the past two years run from 30 to 40 per cent—in one group-rank it is 48 per cent—of the gains of the preceding eighteen years combined. (See Table 3.) Though this acceleration in the rate of adjustment has been inequitably, even dangerously, long delayed, we can recognize the administrative energy, and the alerting of public attention that have made it possible. But for the adjustment to reach appropriate levels, persistent zeal is required.

In respect to the darker side of the data on salary adjustments in the two decades, we concentrate our comment on two significant features. The first is symbolized in Chart 1. The empty spaces in the bars before the line

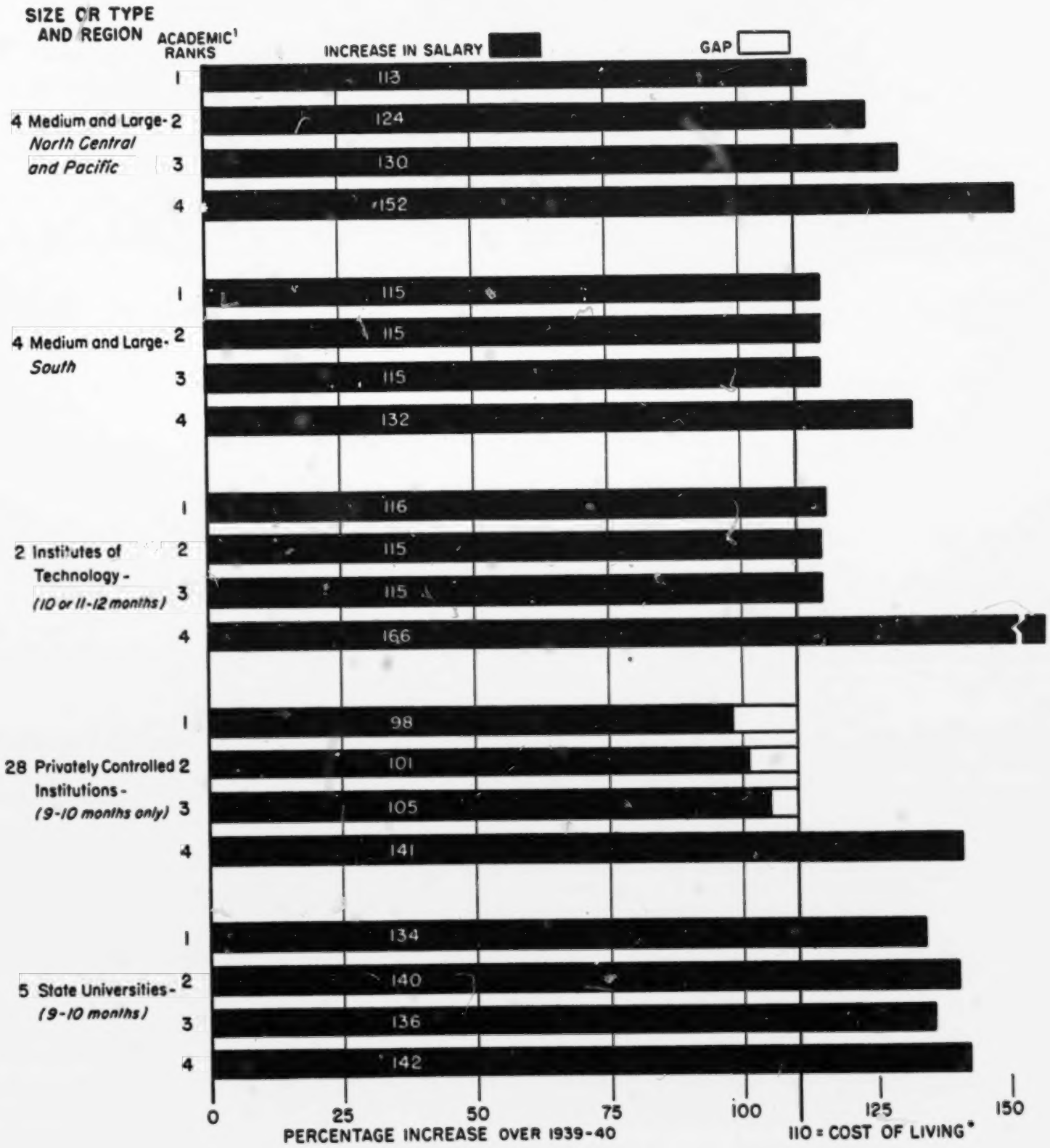
Chart 1—Increases and Buying-Power Gaps in Instructional Salaries

The increase in weighted mean salaries from 1939-40 to 1959-60 in comparison with the rise in consumer prices to 1959, by academic rank and group—34 institutions (9-10 month basis except as noted)



* Based on Consumer Price Index, Bureau of Labor Statistics.
[1] Academic Ranks: 1—Professors, 2—Associate Professors, 3—Assistant Professors, 4—Instructors.

Chart 1—(*continued*)



Sources: From data in Tables 2 and 3.

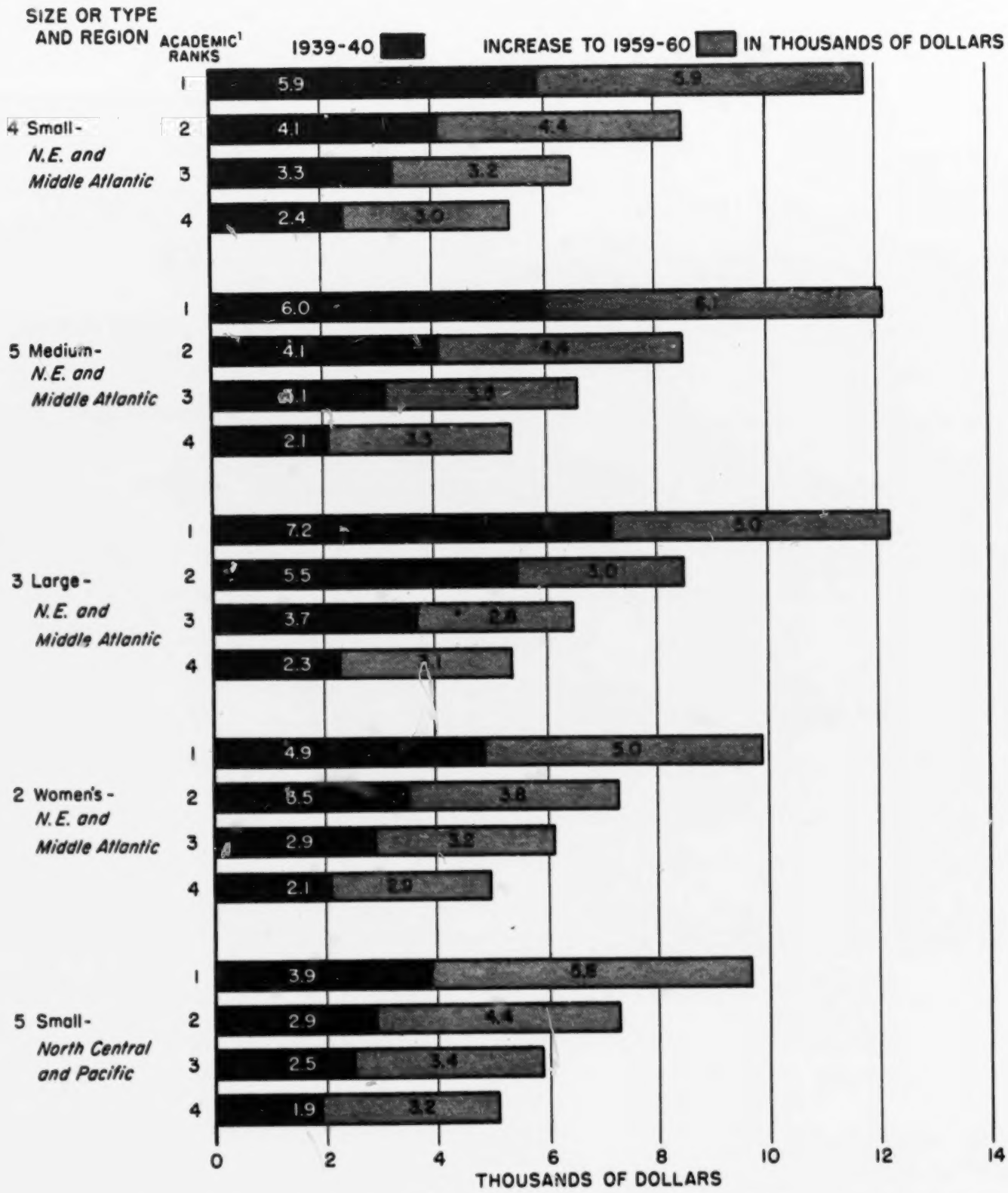
* Based on Consumer Price Index, Bureau of Labor Statistics.

[1] Academic Ranks: 1—Professors, 2—Associate Professors, 3—Assistant Professors, 4—Instructors.

Chart 2—Weighted Mean Instructional Salaries in 1939-40 and Increases to 1959-60

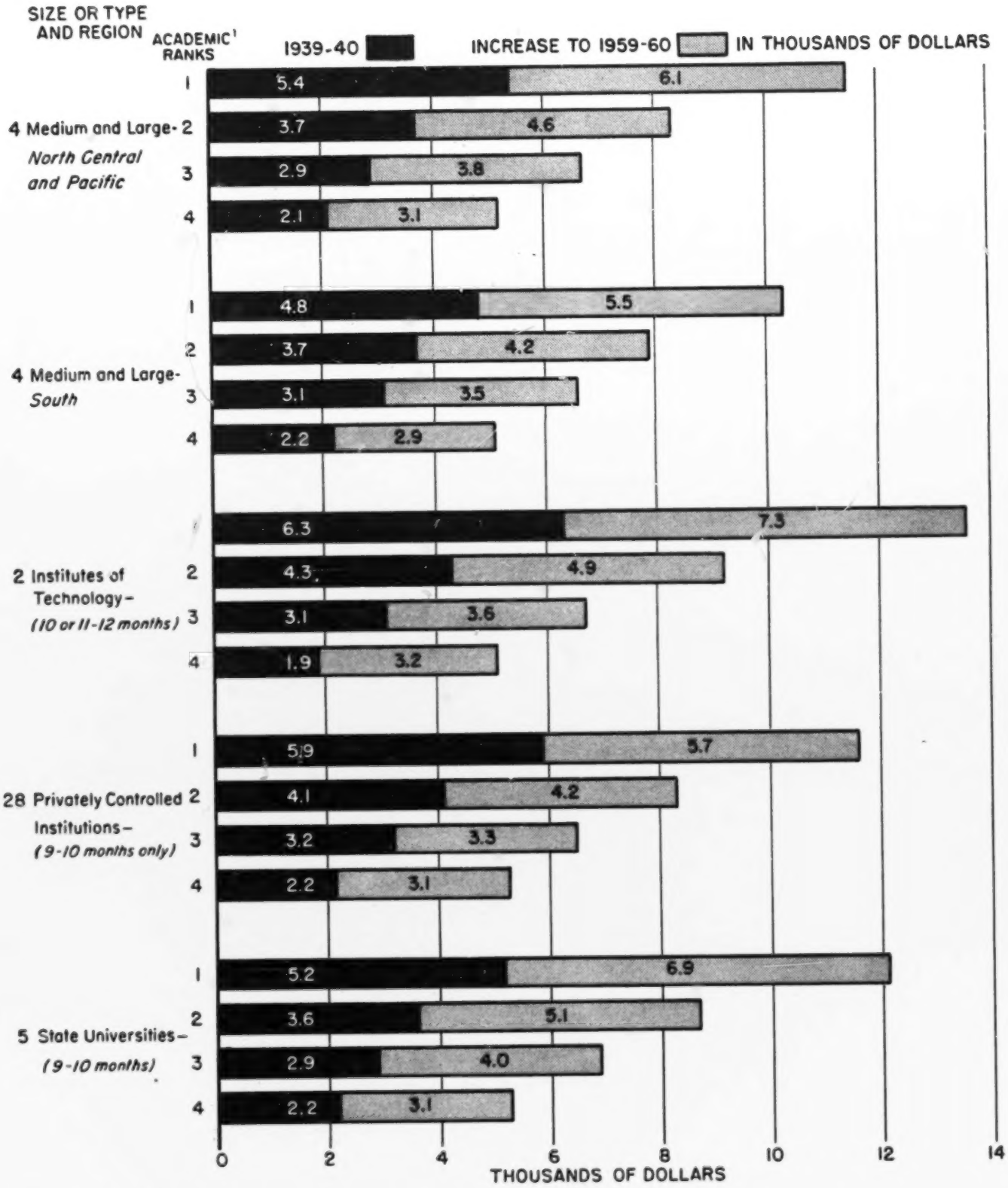
By Academic Rank and Group of Institutions—34 Institutions

(9-10 months basis except as noted)



[1] Academic Ranks: 1—Professors, 2--Associate Professors, 3—Assistant Professors, 4—Instructors.

Chart 2—(*continued*)



[1] Academic Ranks: 1—Professors, 2—Associate Professors, 3—Assistant Professors, 4—Instructors.

marked 110 are now found exclusively in the upper ranks of the Eastern institutions, long among the pacemakers for higher education in this country. What factors delayed their response to this aspect of our inflationary epoch? One consideration, certainly, is that in 1939-40 their salaries were notably higher than in other comparable regional groups; it has, therefore, cost these Eastern institutions more to raise their mean salaries by, say, 99 per cent than it has cost the five small North Central and Pacific Colleges—which had the lowest mean salaries of any group in 1939-40—to raise their mean salaries by 150 per cent. The force of this point is evident in Chart

TABLE 3—*Weighted Mean Salaries in 1939–40, 1957–58, and 1959–60 showing Percentages of 1939–40, by Rank and by Group of Institutions*

34 Institutions

(9–10 months basis except as noted)

Number, Size or Type, Region and Academic Year	*Professors*		*Associate Professors*		*Assistant Professors*		*Instructors*	
	Mean Salary	*Percentage of 1939–40*	*Mean Salary*	*Percentage of 1939–40*	*Mean Salary*	*Percentage of 1939–40*	*Mean Salary*	*Percentage of 1939–40*
New England and Middle Atlantic								
Four Small								
1939–40	$ 5,941	100	$4137	100	$3348	100	$2395	100
1957–58	9,969	168	7531	182	5818	174	4754	198
1959–60	11,806	199	8563	207	6530	195	5441	227
Five Medium								
1939–40	5,977	100	4128	100	3051	100	2119	100
1957–58	10,081	169	7430	180	5910	194	4850	229
1959–60	12,085	202	8503	206	6638	218	5372	254
Three Large								
1939–40	7,163	100	5510*	100	3669	100	2337	100
1957–58	11,013	154	7777*	141	5877	160	4592	196
1959–60	12,192	170	8465*	154	6522	178	5407	226
Two Women's								
1939–40	4,886	100	3509	100	2908	100	2080	100
1957–58	8,708	178	6481	185	5528	190	4508	217
1959–60	9,845	201	7307	208	6075	209	4984	240
North Central and Pacific								
Five Small								
1939–40	3,855	100	2876	100	2534	100	1938†	100
1957–58	7,983	207	6322	220	5321	210	4545†	235
1959–60	9,623	250	7310	254	5969	236	5185†	268
Four Medium and Large								
1939–40	5,386	100	3748	100	2913	100	2070	100
1957–58	9,834	183	7256	194	5881	202	4526	219
1959–60	11,498	213	8382	224	6707	230	5220	252
South								
Four Medium and Large								
1939–40	4,815	100	3688	100	3081	100	2186	100
1957–58	8,991	187	1722	193	5789	188	4473	205
1959–60	10,364	215	7938	215	6633	215	5071	232
New England and Pacific								
Two Institutes of Technology (10 or 11-12 month basis)								
1939–40	6,292	100	4271	100	3095	100	1947	100
1957–58	11,509	183	8250	193	6467	209	4903	252
1959–60	13,593	216	9194	215	6664	215	5172	266
North Central and Pacific								
Five Large State Universities								
1939–40	5,162	100	3624	100	2940	100	2187	100
1957–58	11,259	218	8039	222	6396	218	5137	237
1959–60	12,055	234	8695	240	6949	236	5290	242

* Two institutions.

† Four institutions.

Source: Calculated from data in Appendix Table I.

2 and in the mean salaries shown in Table 3. These data are needed to complement Chart 1. The measurement of the percentage rates of increase as applied in Chart 1 in relation to the change in living costs is an appropriate test for determining the extent to which an institution or group of institutions has maintained the purchasing power of the staff in this time of inflation; but it does not test the adequacy of the salaries paid at either end of the period.

The second feature of the data on which we wish to comment also requires reference to Table 3. It is the matter to which we have alluded in earlier reports: the maintenance of financial incentive throughout the greater part of the career of a member of the profession. One of its facets is the extent of the salary-spread between instructors and professors. Despite improvements of the past two years, the spread between the beginning salaries and those of the mature members of the profession is still much narrower today than it was twenty years ago. Whereas, in 1939-40, it was typical for the mean salaries of professors to be two and one-half to three times those of instructors, today there is no group in Table 3 in which the mean for professors is up to two and one-half times the mean for instructors. The stimulus of monetary incentive towards maintenance of professional effort is significantly lower than it was before the last war.

Comparison of the top salaries paid professors in 1939-40 with those paid today also suggests that there is now rather less monetary stimulus than formerly for those in full career. In 1939-40, there were, altogether, approximately forty-seven professors out of a total of 2304 at, or above, $10,000 on the 9-10 months basis in thirty-three institutions (almost entirely in the larger institutions). Today, a salary at, or above, $21,000 would be required to afford equivalent purchasing power. In the same group of institutions today, with a total of 4362 professors on the 9-10 months basis, there are just two appointments at $21,000 or better, and just nineteen in all at $20,000 or better. Relative to purchasing power, then, the range of financial reward in this sample of our better salaried institutions is more constricted than it was twenty years ago. These diminished possibilities of material reward, even in an austere society, would have serious significance, since any dilution of the sense that services are valued will tend to weaken the sense of high calling; and if the exemplars of the profession lose their faith, wherewith shall it be renewed or they be replaced? But ours is no austere society. Amid our ever-expanding affluence, material factors exert ever greater force, altering, indeed, the very mechanics of dedication.

III. Decline In Relative Income

One set of reasons for qualifying the note of optimism we expressed at the beginning of this report is clear in the evidence and comment above. Though our selected institutions have speeded up their salary adjustments in the past two years, the privately controlled institutions as a group have not yet, after twenty years, quite won the struggle to restore purchasing power in balanced salary structures. Yet more than a mere equivalence in purchasing power with that of 1939-40 is now involved. In this interval, while colleges and universities have had their eyes fixed on approximating the *real* income levels of the *past, real* income for the nation as a whole has advanced rather steadily to much higher levels. If our selected sample is at all typical of the better institutions in the country, there is still much to be done to place higher

TABLE 4—*Weighted Mean Salaries, including Institutional Contributions to Retirement Annuities, in 1939–40 and 1959–60, and changes in Real Income Relative to 1939–40, in the Four Academic Ranks and in All Ranks Combined*

32 Institutions

(9–10 months basis only)

	Professors		*Associate Professors*		*Assistant Professors*		*Instructors*		*All Ranks Combined*	
	Mean Salary	*Real Income Relative 1939–40 = 100*	*Mean Salary*	*Real Income Relative 1939–40 = 100*	*Mean Salary*	*Real Income Relative 1939–40 = 100*	*Mean Salary*	*Real Income Relative 1939–40 = 100*	*Mean Salary*	*Real Income Relative 1939–40 = 100*
28 Privately Controlled Institutions										
1939–40	$ 6,166	100.0	$4349	100.0	$3345	100.0	$2237	100.0	$4205	100.0
1959–60	12,845	99.3	9129	100.0	7203	102.6	5638	120.1	9394	106.4
4 Large State Universities										
1939–40	$ 5,334	100.0	$3789	100.0	$3100	100.0	$2355	100.0	$3791	100.0
1959–60	13,244	118.3	9518	119.7	7589	116.6	5737	116.1	9659	121.4
32 Privately Controlled and Large State Universities Combined										
1939–40	$ 5,895	100.0	$4146	100.0	$3274	100.0	$2274	100.0	$4054	100.0
1959–60	13,014	105.2	9318	107.1	7371	107.3	5681	119.0	9510	111.8

Source: Salaries from data for Appendix Table II; real income relative estimated by use of the Consumer Price Index, taking September, 1959 (209.9, 1939–40 = 100) for the academic year 1959–60.

education back in the running. The need for the highest quality is generally acknowledged throughout the land. The growing complexity of our civilization, the penetration into new realms of science, both of the universe and of society, and the competitive exploitation of this knowledge in international affairs, all point to a need for education beyond our past experience. How to attain the financial conditions for high quality in both an inflationary and an expansive economy is still one of the unresolved problems of our national life.

In September, 1959, total personal income in the United States had reached an annual rate of $379.6 millions, representing an increase of 9.5 per cent in the two years since our last survey, and a gain of 422 per cent since 1939. Population, however, has grown by some 36 per cent since 1939. Per capita income, on an average, and on a current dollar basis and before taxes,[4] has risen some 283 per cent above 1939. The decline in the purchasing power of the dollar has cut the real value of these current dollar amounts to less than half; with adjustment for price change, the gain in real personal income per capita has been approximately 82.5 per cent.

This figure of 82.5 per cent gain in real income per capita is, of course, a statistical average. But it means that any group which maintained its relative position in the economy enjoyed a rise in real income very close to that rate. Available statistical data show that, in actual experience, there have been large gains for most occupational groups. For example, average weekly earnings of production workers in all manufacturing industry had risen 272 per cent by August, 1959. Adjusted to real income terms, they were about 77 per cent above 1939, or close to the average gain in per capita real income. Average weekly wages of bituminous coal miners had risen 397 per cent; adjusted, this rise means an increase in real income of about 137 per cent.[5]

These figures will suggest the profound change in income relationships in the country generally. Table 2 supplies a rough clue to the degree of disparity between the average gains in the country and those in higher education. The mean salary of college and university instructors, whose rank has done better than the rest, shows a real income gain of only about 15 per cent. It is interesting and illuminating to compare the change in income relationship between instructors and the two occupations cited above, although adjustment to a common basis for comparison must be forced. In 1939, the average weekly wages of both production workers and bituminous coal miners was about 45 per cent of the mean salaries of instructors in the thirty-three colleges and universities (Table 2) reduced to a weekly basis (assuming, for this purpose only, a 40-week year for instructors). As of August, 1959, average weekly wages of production workers were nearly 67 per cent, and those of bituminous coal miners were 90 per cent of the 1959-60 mean (not the beginning) salary of instructors—who in these thirty-three colleges and universities were still expected to have spent six to eight years in college and graduate school training. Two years ago, the differential was even smaller—the proportions were 72 and 96 per cent, respectively. But it is still clear, as we wrote then, that the teaching profession now has a much narrower margin of initial reward for its long, arduous, and costly preparation, and for its later beginning of earning power.

When we turn to compare the changed economic status of our teaching staffs with that of the most relevant professions, such as law, medicine, and dentistry, we need nowadays a somewhat different statistical basis for measurement of salary scales in colleges and universities. In recent years, a considerable extension of fringe benefits supplied by the institution, most notably in the form of better provision for retirement annuities, has added something to basic salaries of instructional staffs, and should assure better long-term material welfare. Retirement benefits cannot, of course, be counted in relation to the rise in the cost of living, for they are tied funds that add nothing to current purchasing power. It may be, too, that a continuance of inflation will diminish the real value of pension provisions. On the other hand, rising prices may be offset by accumulation of interest allowances, and by other fringe benefits beyond the retirement funds that we have the data to include. The other learned professions are largely composed of the so-called self-employed whose provision for retirement—at their own choice, however—is out of net professional income. These groups do enjoy, generally, some fringe benefits in the form of courtesy exchange of service without fee, or at reduced fees. It seems fair to assume that these benefits, on an average, about equalled in value the much more limited provisions made by institutions for their teaching staffs in 1939-40.

Though we do not have data for exact and comprehensive measurements of all fringe benefits in each of the groups to be compared, we propose to take into account, where questions of change in relative income status are involved, the values for which we do have data from our sample of colleges and universities, namely, the institutional contributions (including O.A.S.I. when applicable) towards annuities scheduled to begin at retirement age. The aggregations for the twenty-eight privately controlled institutions and four large state universities for which we have calculable data on the 9-10 months basis for 1939-40 and 1959-60 are presented in Table 4.[6] As in Table 2, and for the same reason, we also show the weighted means for these two groups combined.

[4] All of the income data presented in this report are, like the salaries of instructional staffs in the selected colleges and universities, taken before income or other tax deductions.

[5] Personal income, population, and wage increases calculated from data in *Survey of Current Business*, October, 1959, and *Survey of Current Business*, National Income Supplement, 1957.

[6] Similar data for the regional size- and type-groups are given in Appendix Table II of this report, and in the Preliminary Report (*op. cit.*, p. 491) Table X, where base salary and pension provisions are distinguished.

The increases in these fringe benefits in recent years, then, improve significantly the economic position of the instructional staffs in our selected institutions. In the twenty-eight privately controlled institutions, the relatives indicating real income in terms of 1939-40 purchasing power are raised above those for mean base salary in Table 2 by about 5 points for each rank and for all ranks combined. In the large state universities, where only four of the five shown in Table 2 can be aggregated on this basis,[7] the increases are smaller but are still worth noting. In our comparisons with the other learned professions, we use the weighted mean salaries for all ranks combined in the aggregation of thirty-two institutions which, with annuity allowance, is about 6 percentage points higher than when calculated on base salaries alone. This value represents the salary position of the instructional staffs in these institutions as a whole, and is appropriate for comparison with mean values (similarly composed of beginning, middle, and high career incomes) in the other learned professions.

The data at our disposal indicate that the instructional staffs in our selected institutions have suffered a marked decline in economic status relative to the legal, medical, and dental professions during the two decades under review. In 1939, when the average salary for all ranks combined in our selected group was $4054, the margin separating them from the first two—both competitors in attracting able personnel—was very small. According to a fairly broad sample survey covering this and other years to 1951, the mean net professional income of non-salaried physicians was $4229 and that of lawyers was $4391. All three were considerably above that of dentists, which was $3096.[8] By 1953, when the mean for all ranks combined in the selected institutions was $6986—only about 95 per cent of the real income of 1939-40—the mean net professional income of physicians had risen to some $15,000 and that of dentists to $8500,[9] representing, respectively, gains of 86 per cent and 39 per cent in real income. It seems highly probable that the net incomes of physicians and dentists have risen still more in the six years that have elapsed since 1953.[10] For lawyers, too, the margin of advantage over our teaching staffs seems to have widened considerably from the 8 per cent of 1939. By 1956, with mean income in the neighborhood of $11,400[11]—representing a gain of about 34 per cent in real income since 1939—lawyers were already 37 per cent above the mean for all ranks combined ($8341) reached in 1957-58 in our selected institutions. In short, all three of these professions now offer larger financial rewards than the teaching profession which bears the responsibility for the quality of the basic training of the candidates for all of them.

Another measure of the decline in relative economic status of the instructional staffs of our selected group is the income percentile in which their salaries fitted at the beginning and at the end of these two decades. The mean salaries, including annuity contributions, shown for 1939-40 in Table 4, place professors ($5895) in the top 4 per cent of all family incomes in this country as late as 1941, while by the mean salary in 1959-60 ($13,014) they make only the top 8 per cent of the latest available estimate, that for 1957. At the other end of the scale, the mean salaries for instructors fell in the top 35 per cent in 1939-40, but have declined relatively so that they can now be counted only in the top 42 per cent of the 1957 distributions.[12] Of the available distributions, those for 1941 and 1957 are the closest to 1939-40 and 1959-60, but by using them we understate the decline of the relative status of the faculties of our group of institutions. Personal income in 1941 was 28 per cent above the average for 1939-40; and on a per capita basis the increase from 1939-40 to 1941 was 25 per cent. If the smaller volume of income in 1939-40 had been distributed, instructional salaries would have been somewhat higher on the percentile scale. Similarly, personal income for September, 1957 was 8 per cent lower than the consonant figure for September, 1959, and thus the testing of our 1959-60 instructional salaries against the 1957 percentile scale tends to place them too high. The 1957-58 salaries, shown in Table 9, would place professors ($11,575) only in the top 10 per cent, and instructors ($5245) in the top 47 per cent. Even if all family incomes had changed by the same percentage as personal income between 1957 and 1959, the 1959-60 salaries of professors would be only in the top 9 per cent, while instructors' salaries, which increased by about the same percentage as personal income, would remain in the same position as in 1957-58.

The salaries now paid in business and industry have contributed much to this profound change in relative status. Moreover, business and industry now wage a much more active competition for college and university graduates—so much more active, indeed, that college placement directors in consultation with business and government recruiting officers have felt it desirable to set up a code

[7] In one large state university, the formula for retirement annuities is too complex to permit us to compute the mean values.

[8] "Income of Lawyers, Physicians and Dentists", by William Weinfeld, *Survey of Current Business,* July, 1952, pp. 5-7.

[9] Income values for physicians and dentists as cited by Ruml and Tickton (after consultation with the Department of Commerce in which the series, cited above, was prepared), *Teaching Salaries Then and Now,* New York, 1955, pp. 80-81, 88.

[10] According to another study, reported in *Medical Economics,* October, 1956, pp. 110-129, mean net professional income of physicians rose from $4470 in 1939 to $18,122 in 1955, a gain in real income of 110 per cent.

[11] Calculated from data cited by the President's Committee on Education Beyond the High School, in its *Second Report,* Washington, D. C., July 1957, p. 34.

[12] The 1941 distribution is from "Size Distribution of Income since the Mid-thirties," by Selma Goldsmith, George Jaszi, Hyman Kaitz, and Maurice Liebenberg, *Review of Economics and Statistics,* Vol. 36, February, 1954, p. 4. The distribution for 1957 is that prepared by the Department of Commerce, *Survey of Current Business,* July, 1959, p. 20.

governing recruitment practices.[13] Their representatives frequent conference rooms of college and university placement offices where the reading racks are filled with their brochures setting forth attractive opportunities that include in-job training, rapid advancement, and multiple fringe benefits. The beginning salaries that business and industry offer are well above those for instructors in our colleges and universities; the salaries they offer at the Ph.D. level exceed the mean for assistant professors and rival that for associate professors—even without counting their advantages in early "fringe benefits" and in relatively rapid salary advancement. The following tabulation of average monthly beginning salaries in 1956-57 and in 1958-59[14] indicates something of the measure of their economic pull. The percentage increase over the two years is also shown.

Degree	*Mean 1956-57*	*Mean 1958-59*	*Increase %*
Non-technical			
B.A./B.S.	$391	$429	9.7
M.A./M.B.A.	429	490	14.2
Technical			
B.S.	$436	$490	14.4
M.S.	489	554	13.3
Ph.D.	645	747	15.8

These are average rates. In some fields, notably aircraft and research, average offers for both technical and non-technical personnel go higher, and maximum offers are higher still. It will be noticed that the largest percentage increases in average monthly salaries are for those with advanced degrees—truly the "seed corn" level for college and university faculties—and that, at the Ph.D. level, these rates of increase exceed the average gains of both instructors and assistant professors in the past two years. The margin of disadvantage is growing. These rates of increase for beginners in business and industry suggest insufficient supply to meet all demands.

[13] *Principles and Practices of College Recruiting*, The College Placement Council, Inc., Bethlehem, Pa.

[14] *Annual College Recruitment Survey of the Midwest College Placement Association*, 1957, p. 27; and *Journal of College Placement*, October, 1959, p. 74.

IV. Institutional Differences

Charts 3-9 indicate graphically, as in earlier reports in the series, something of the variety of salary experience within the selected groups of institutions. The bars show the median salary prevailing in each rank in 1959-60 and in 1939-40, in each of the larger groups of institutions. Horizontal lines mark the median of the medians in each rank for these years. Each institution bears a code number arranged in order of the magnitude of the median salary of professors in 1959-60. These charts—indicating some of the institutional variations that occur, but not revealing the identity of the institution—modify the impression of uniformity that the weighted averages may create. It is evident that institutional relationships have not held constant over these two decades of rapid economic change. In several groups, institutions would bear different code numbers were the order of medians in 1939-40 followed. Another noticeable feature of the medians for these relatively homogeneous groups is that the institution which ranks best for instructors is not always at the top of its group for the upper ranks. Problems of recruitment with a more limited salary structure possibly influence this divergence.

V. Salary Patterns in Large State Universities

The five large state universities have provided the Committee with complete instructional salary distributions by class intervals for each of the report years. This information shows how many members of each rank

Median Salaries in 1959-60 and 1939-40 by Institution and by Academic Rank
(9-10 months basis only)

Chart 3—Six Small Institutions in New England and Middle Atlantic

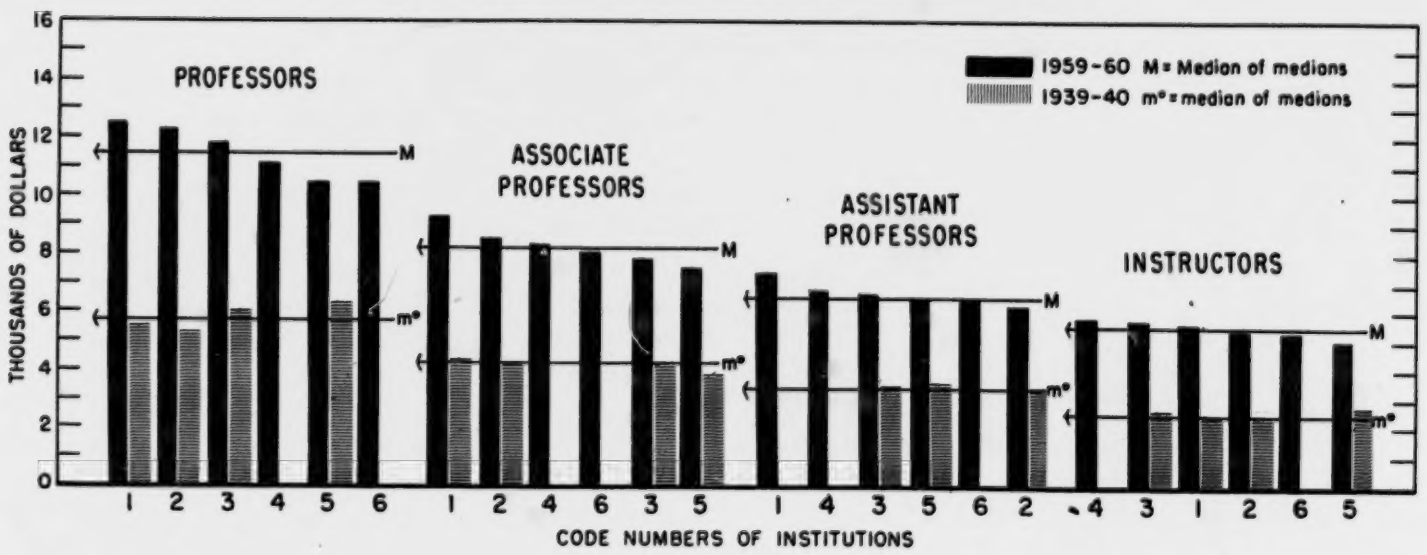


Chart 4—Five Medium-Sized Institutions in New England and Middle Atlantic

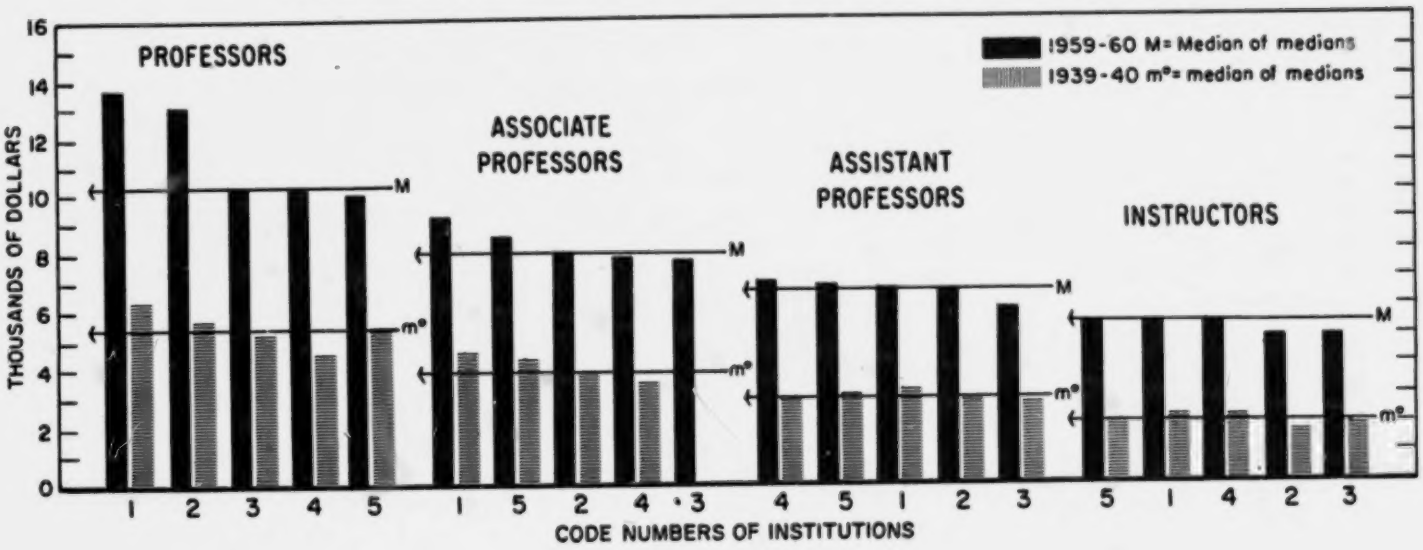


Chart 5—Five Large Institutions in New England and Middle Atlantic

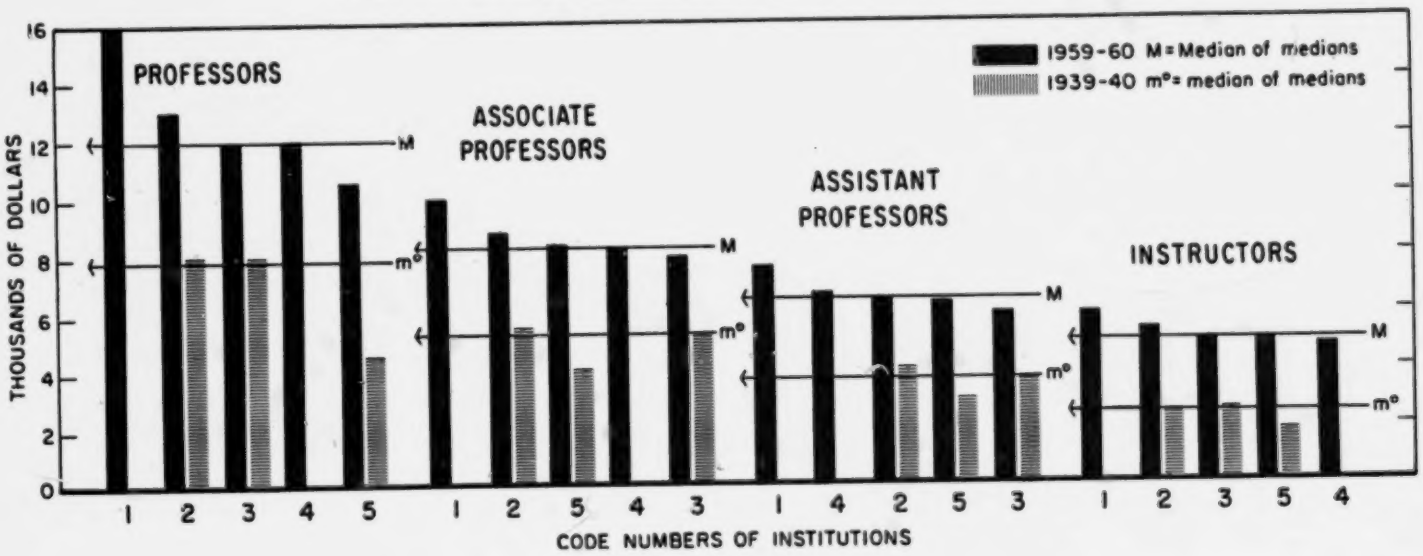


Chart 6—Five Small Institutions in North Central and Pacific

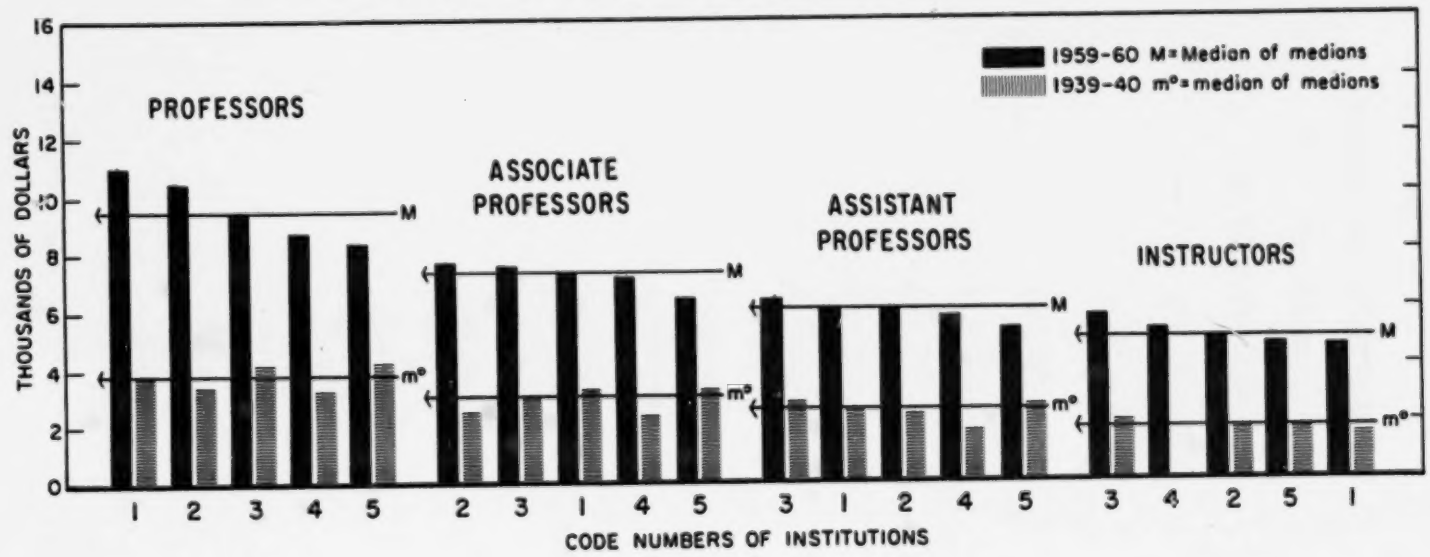


Chart 7—Four Medium-sized and Large Institutions in North Central and Pacific

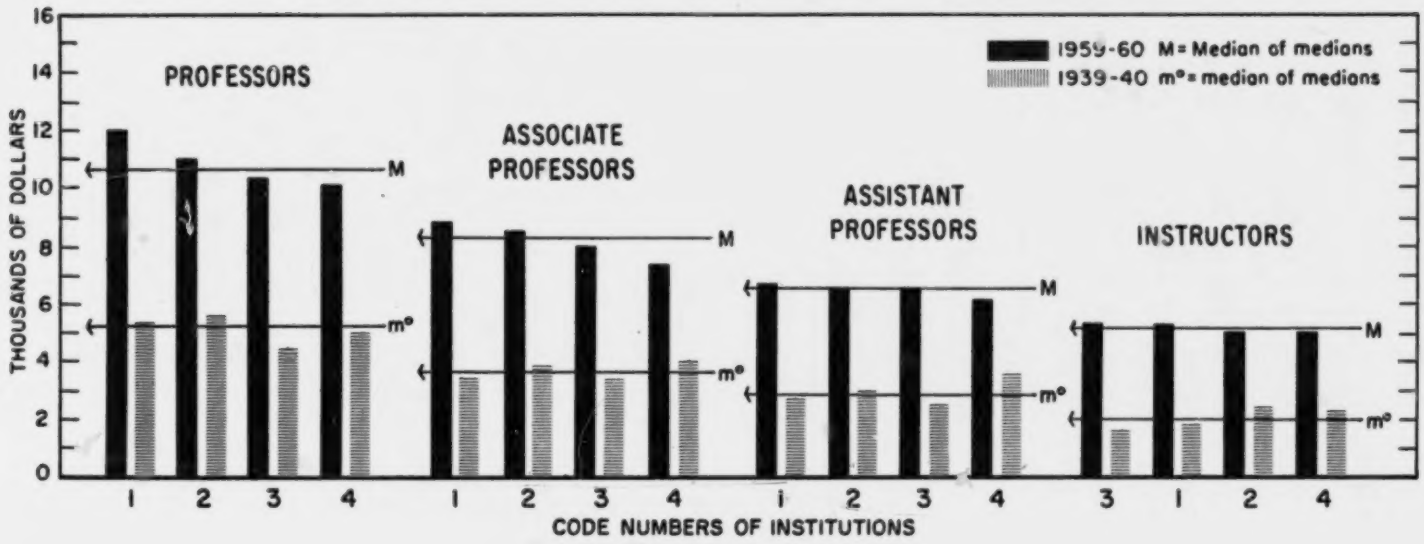


Chart 8—Four Medium-sized and Large Institutions in South

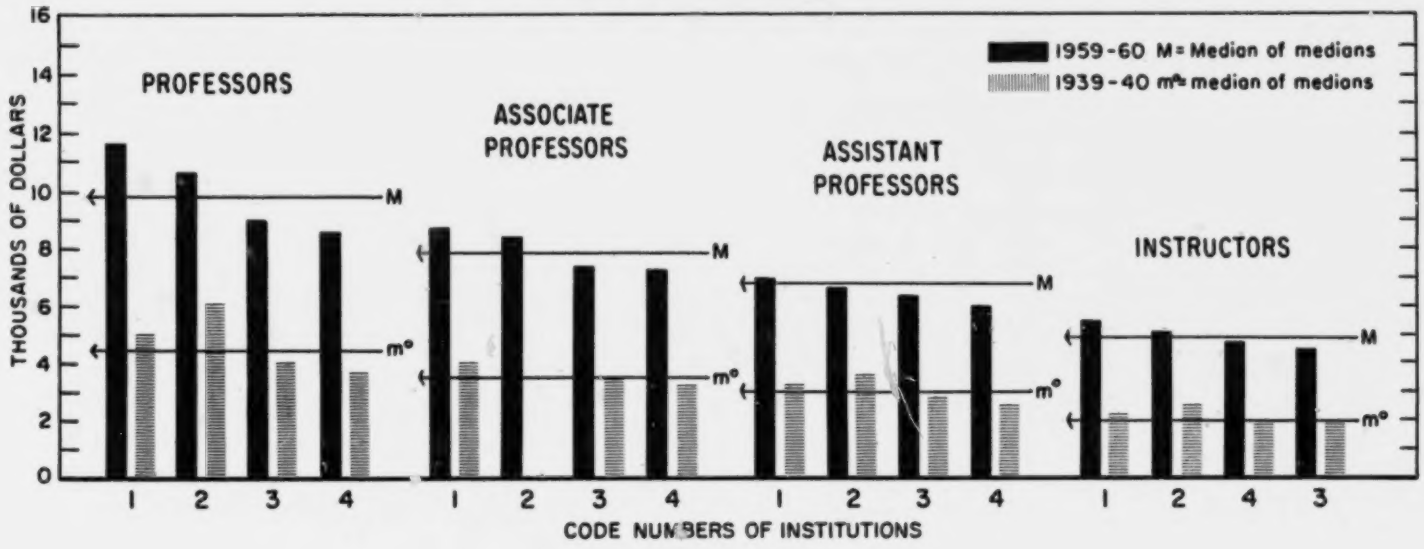


Chart 9—Five Large State Universities in North Central and Pacific

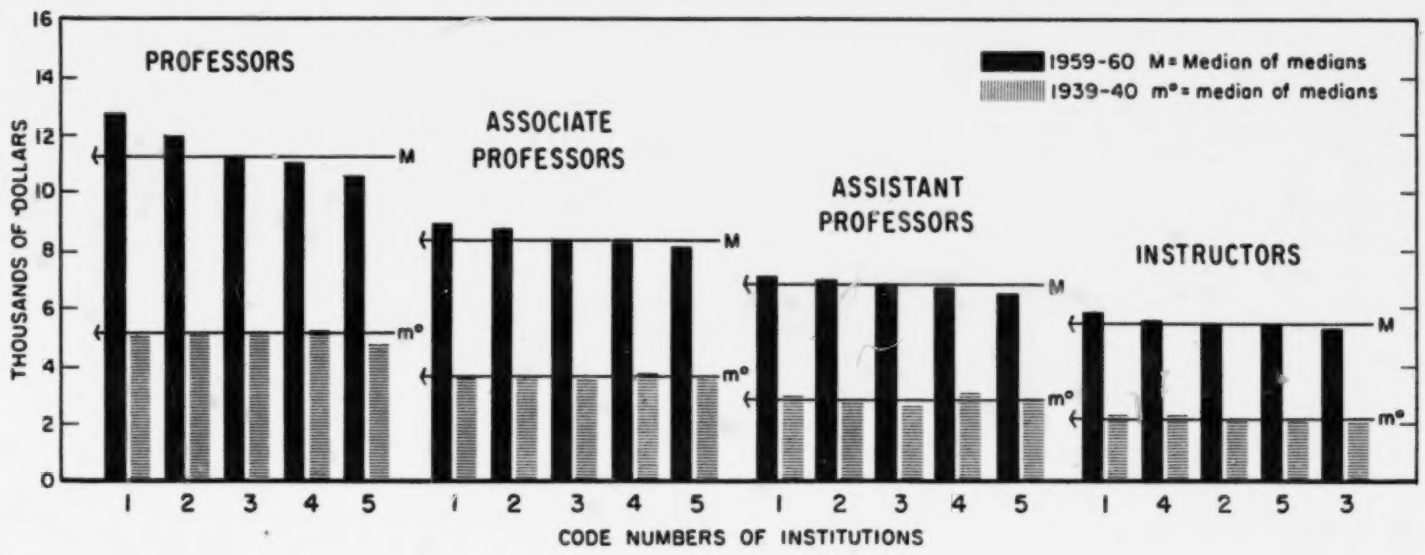


TABLE 5—*Weighted Median Salaries* of the Four Academic Ranks and of All Ranks Combined in Five Large State Universities in Three Reported Years, 1939–40 to 1959–60*

(9–10 months basis only)

	1939–40		*1949–50*		*1959–60*	
	No.	*Median Salary*	*No.*	*Median Salary*	*No.*	*Median Salary*
Professors	888	$5030	1283	$7410	1992	$11,800
Associate Professors	530	3620	879	5600	1472	8,700
Assistant Professors	648	3030	1256	4570	1538	7,010
Instructors	787	2160	1427	3560	1033	5,620
All Ranks Combined	2853	3330	4845	4890	6035	8,320

* Values rounded to the nearest $10.

received salaries within each interval; for example, from $9000 to $9249. This information enables us to examine the changes in salary patterns in this group over the twenty-year period. Table 5 shows the medians of these combined distributions for the beginning, middle and end of the period. Table 6 indicates the gains, and Charts 10-13 show the "more than" cumulation curves for 1939-40, 1949-50, and for 1959-60.

The gains in salary levels are shown in Table 6, both in dollars and percentages, for each of the two decades and for the whole period. In the first decade, salary adjustments were particularly laggard. By 1949-50, salary increases were much less than the rise in living costs—which, by September, 1949, was 72 per cent—and bore little relation to the growth of personal income per capita of approximately 140 per cent. Against these percentages, professors, and all ranks combined, showed a gain of only 47 per cent, with the median for the latter, however, being depressed a little by the increase in proportions of staff in the lower ranks to cope with the post-war bulge in enrollments (see Table 8). In the second decade, salary adjustment has been much accelerated. The percentage rates of gain, calculated on the 1949-50 base, exceed, except for instructors, those of the first decade, calculated on the much lower 1939-40 base. The gains have now filled in the deficiencies in purchasing power, despite further rise in consumer prices (23 per cent). Measured simply in relation to the averages of 1939-40 in the same institutions (see also Table 2, with comment), the gains have brought, even to the upper ranks, some share in the growth of real income that has taken place in the country. These weighted over-all gains in the medians show much the same trend as the weighted means presented in Table 3, and the gains are in closely comparable rates for each rank except that of instructor, where the weighted medians show a larger rate of gain. That the median for all ranks combined has risen in the second decade more than for any of the three professorial ranks is largely the result of the decline in the proportion of instructors employed since 1949-50, and, indeed, since 1939-40 (see Table 8).

Charts 10-13 show graphically the range and distribution in each of the four ranks in the five large state universities for 1939-40, 1949-50, and 1959-60. These charts are the familiar "more than" cumulations. They supply a great deal of information on the range and distribution in each rank for the group as a whole. Any individual can compare his own salary with those in this group. Any administration or faculty group can measure the medians, range, and distribution in their own institution against these five.

VI. Retirement Provisions

The trend towards more adequate provision for retirement annuities, on which we have remarked in earlier reports,[15] has continued in the latest biennium. All of our selected institutions have retirement programs, and a large majority have strengthened their plans considerably in the post-war period, both by entering the Federal Old Age and Retirement Insurance program, and by increasing the rates of contribution made by the institution. Only a few now remain on the old matching 5-5 rate, and the tendency is for the institution to contribute a larger share, in some cases the whole payment. The weighted average rates for the ranks and groups are shown in Appendix Table II. In the thirty-three privately controlled colleges and universities, the (weighted) average rate of institutional contribution for professors on the 9-10 months basis has risen from 9.6 per cent in 1957-58 to 10.8 per cent in 1959-60. In the slightly smaller group of twenty-eight institutions for which we have data for 1939-40, it has more than doubled since 1939-40, rising from 4.9 per cent in that year to 9.4 per cent in 1957-58, and 10.6 per cent in 1959-60. In the four large state universities for which a reasonably close calculation can be made, it rose from 6.0 per cent in 1939-40 to 8.1 per cent and 9.0 per cent respectively.

Colleges and universities are giving more and more attention to developing collective provision for other

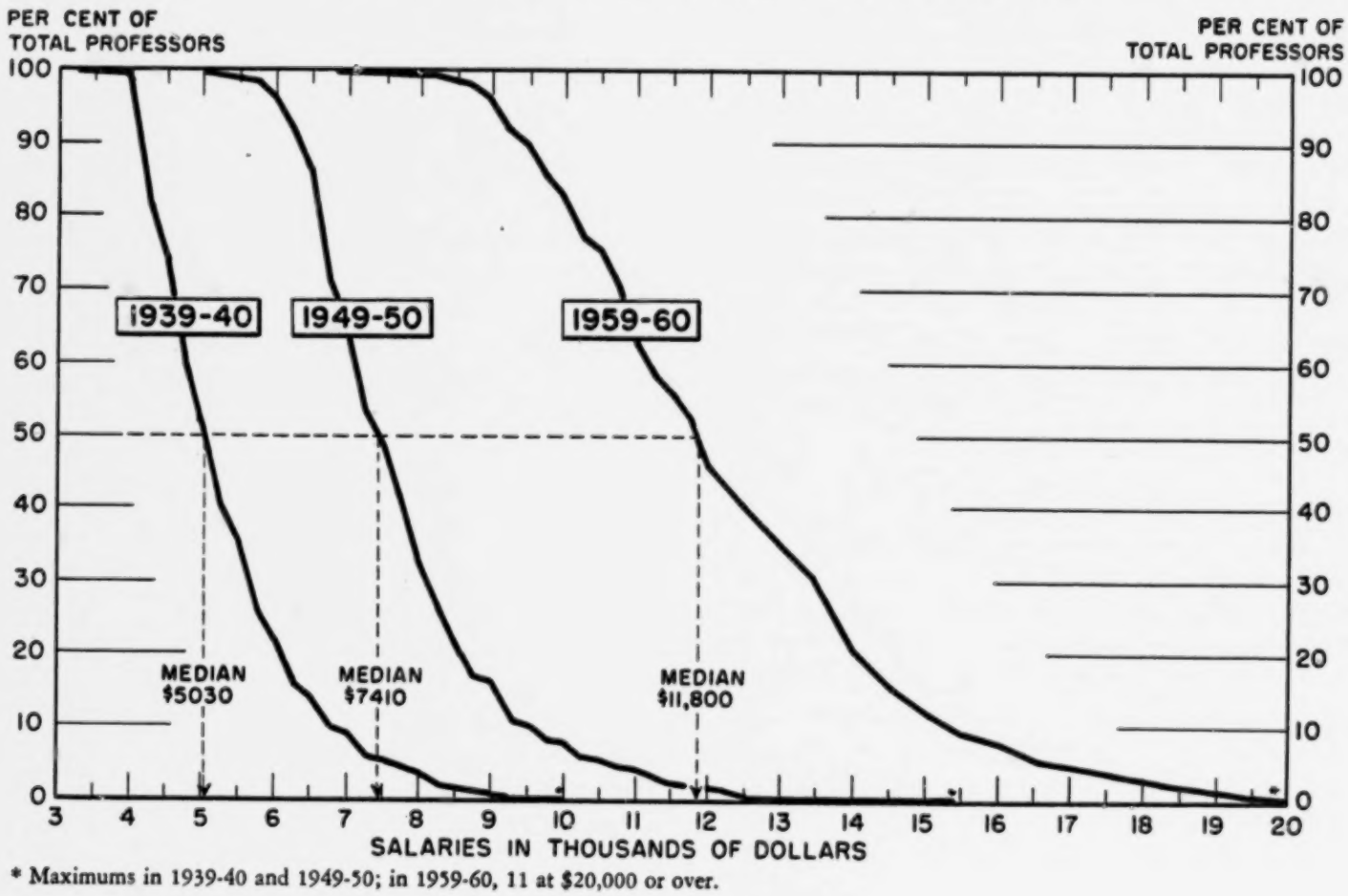
TABLE 6—*Gains in Weighted Median Salaries in Five Large State Universities, 1939–40 to 1959–60*

(9–10 months basis only)

	Gains 1939–40 to 1949–50		*Gains 1949–50 to 1959–60*		*Gains 1939–40 to 1959–60*	
	Dollars	*%*	*Dollars*	*%*	*Dollars*	*%*
Professors	$2380	47.3	$4390	59.2	$6770	134.6
Associate Professors	1980	54.7	3100	55.4	5080	140.3
Assistant Professors	1540	50.8	2440	53.4	3980	131.4
Instructors	1400	64.8	2060	57.9	3460	160.2
All ranks combined	1560	46.8	3430	70.1	4990	149.8

[15] For a brief summary and comment on the trends since 1939-40 in our selected group of institutions, see *AAUP Bulletin*, Vol. 44, No. 1A, Spring, 1958, pp. 259-262.

Chart 10—Professors (888 in 1939-40, 1283 in 1949-50, and 1992 in 1959-60)



* Maximums in 1939-40 and 1949-50; in 1959-60, 11 at $20,000 or over.

Chart 11—Associate Professors (530 in 1939-40, 879 in 1949-50, 1472 in 1959-60)

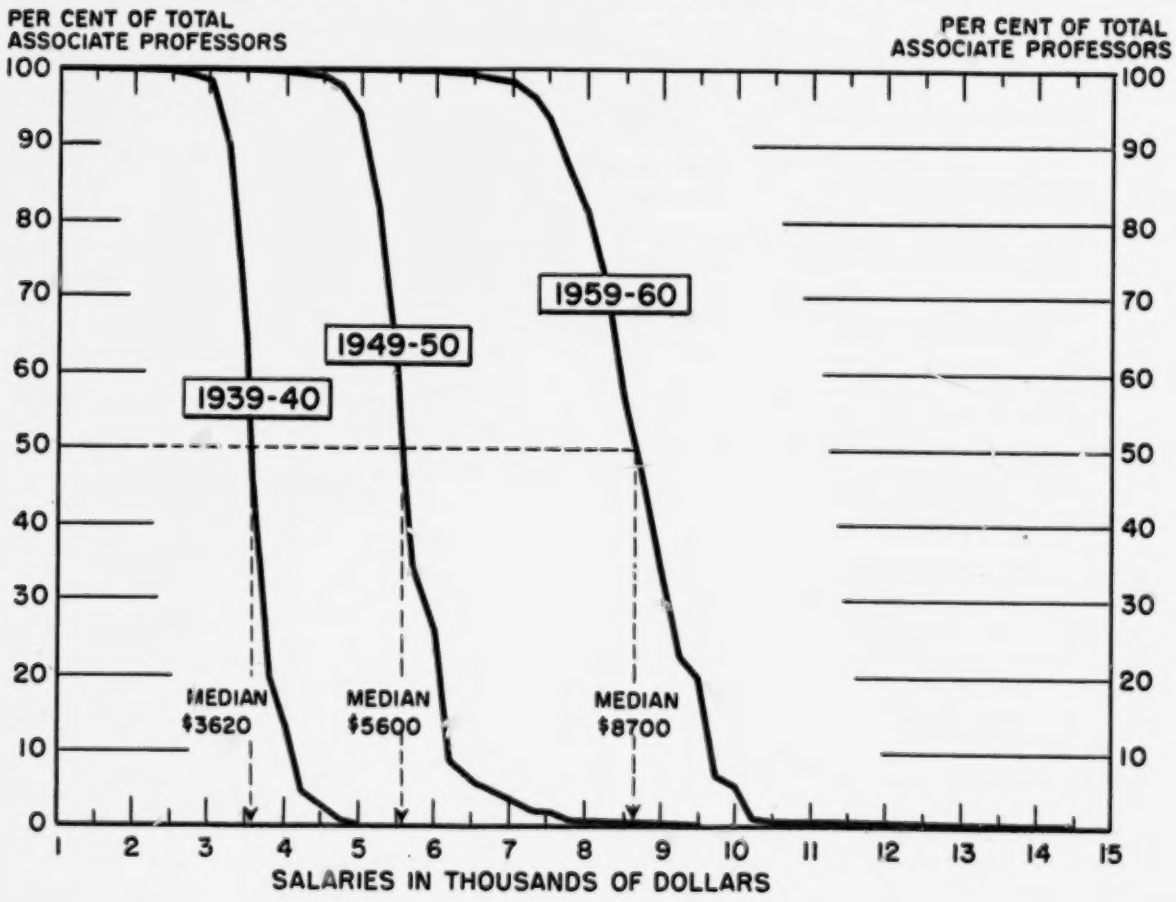


Chart 12—Assistant Professors (648 in 1939-40, 1256 in 1949-50, 1538 in 1959-60)

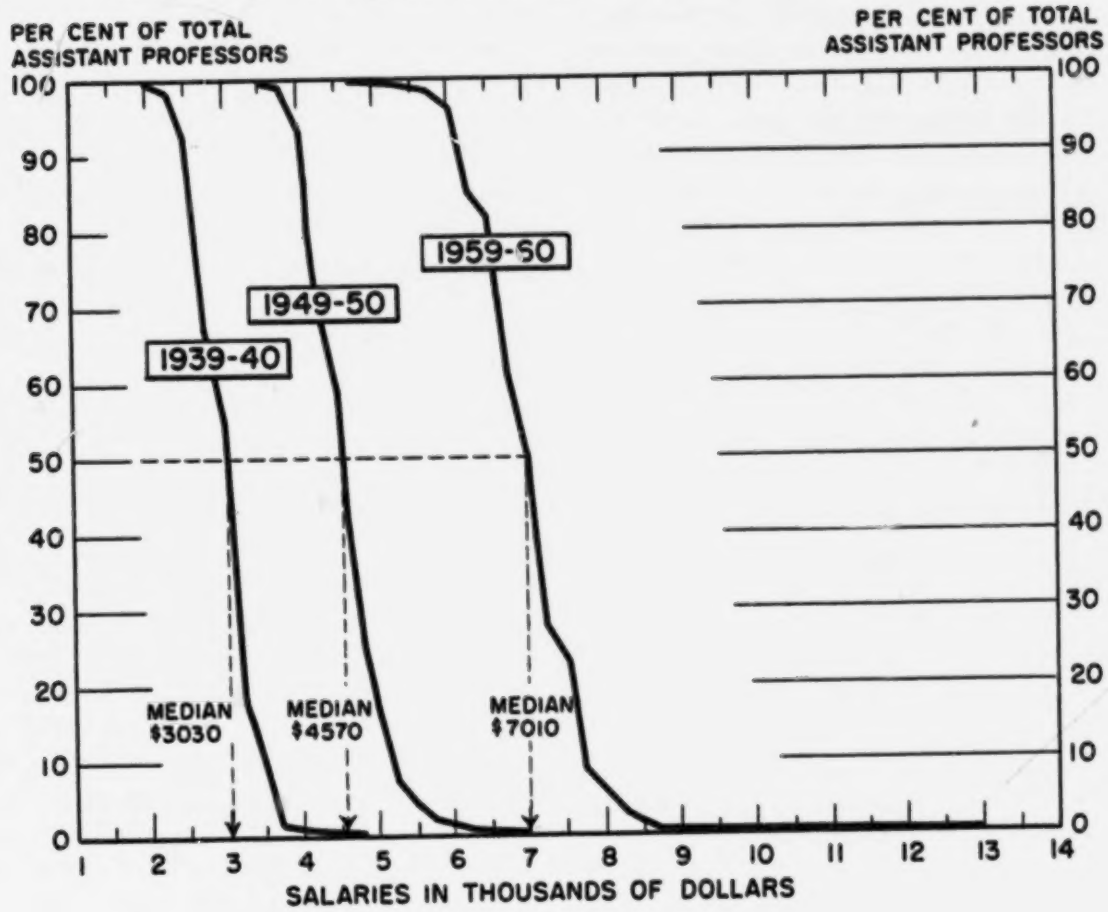
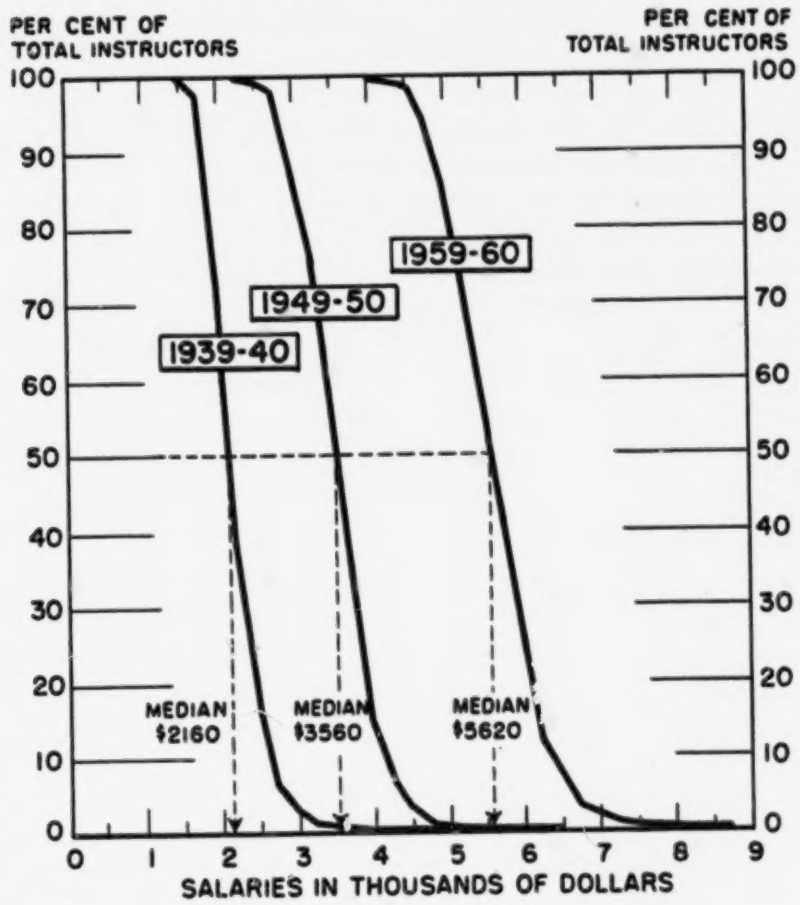


Chart 13—Instructors (787 in 1939-40, 1427 in 1949-50, 1033 in 1959-60)



services. We do not have systematic data on these from each of our selected institutions, but several have volunteered summaries of the benefits offered. They include group life insurance, partly or wholly financed by the institution, health services and/or insurance against medical expenses, and housing. To judge by reports coming in, a growing number are also supplying subventions towards meeting the tuition fees of faculty members' children who attend other colleges and universities. When such services can be contracted for by the institution more efficiently or cheaply (in terms of cost and/or tax savings) than by private means, they serve to moderate the rise in living costs a little, and to make the profession more attractive. To this end, and with experience already accumulating, they were strongly recommended by the President's Committee on Education Beyond the High School two years ago.[16]

VII. Enrollment and Staff

In October, 1959, the total enrollment of full-time students and full-time equivalents in the reported divisions of our selected institutions was 243,897. This total represents an average gain of 5.3 per cent for this group of institutions since 1957; in the preceding biennium, their enrollment increased by 7.9 per cent. These over-all averages appear comparable in trend to those for colleges and universities generally; but we find, as in former report years, a good deal of variation from group to group. Enrollment in five large state universities rose by 6.1 per cent from 1957 to 1959. In thirty-four privately controlled institutions taken together, enrollment rose by 4.4 per cent; but in the groups of privately controlled colleges and universities in the North Central and Pacific area and in the South, the average increase reached 8.0 per cent. On the other hand, for three of the groups in the New England and Middle Atlantic area, enrollment increases averaged 1.5 per cent or less. The latter groups continue to hold their enrollments close to the levels designed to suit their particular functions, facilities, and standards, and also to avoid heavy capital expenditures on new buildings required for greatly increased enrollments. Table 7 shows fall term enrollments of the five large state universities and the twenty-nine privately controlled institutions that have supplied consonant data for the report year 1939 and afterwards.

Overall, the full-time instructional staff increased in very close proportion to enrollments in the last two years. For the whole group of thirty-nine institutions cited in the preceding paragraph, this increase was 4.7 per cent, compared with an increase of 5.3 per cent in full-time students and in full-time equivalents. The full-time student-faculty ratio is now approximately 15.8; it was 15.7 two years ago. For the thirty-four privately controlled institutions, the ratio is unchanged at 13.3, and for the five state universities, the ratio has risen from 18.3 to 18.5. But notice particularly that these ratios consider only full-time faculty. They indicate directions and perhaps degrees of change, but since they do not consider part-time instructional staffs, they are not valid student-faculty ratios. The data reported this year on full-time equivalents of part-time teaching staff—though not complete or precise for the largest institutions where exact calculation would entail much paper work—suggest that a closely calculated ratio for the privately controlled colleges and universities would, as an average, be in the neighborhood of 12, and for the state universities around 15 or 16. The part-time equivalents that were reported are taken into account in the group tables of the preliminary report, and the data there—on range as well as on means—indicate the very considerable institutional differences in this matter of student-faculty ratios.

Table 8 shows the numbers and percentages of total full-time staff in each of the four academic ranks for the two groups of institutions in the four report years beginning with 1939-40. In both groups, the percentages for the three professorial grades together have gained at the expense of the beginning rank. Whether this means that our faculties have a slightly higher average age, or that

TABLE 7—*Fall Term Enrollments in Report Years, 1939 to 1959*

34 Institutions

	5 Large State Universities		*29 Privately Controlled Institutions*		*Total*	
Year	*Number of Students*	*Relative 1939 = 100*	*Number of Students*	*Relative 1939 = 100*	*Number of Students*	*Relative 1939 = 100*
1939	75,252	100.0	57,075	100.0	132,327	100.0
1947	131,397	174.6	94,902	166.3	226,299	171.0
1948	131,854	175.2	95,860	168.0	227,714	172.1
1949	127,838	169.9	89,543	156.9	217,381	164.3
1950	114,010	151.5	83,794	146.8	197,804	149.5
1951	99,164	131.8	78,489	137.5	177,653	134.3
1953	98,537	130.9	75,547	132.4	174,084	131.6
1955	116,202	154.4	80,712	141.4	196,914	148.8
1957	128,476	170.7	84,958	148.9	213,434	161.3
1959	136,274	181.1	88,956	155.9	225,229	170.2

[16] *Op. cit.*, p. 6.

TABLE 8—*Numbers and Percentages of Full-Time Faculty in Each Rank in Four Report Years 1939–40 to 1959–60*

34 Institutions

(9–10 and 11–12 months basis combined)

	Professors		*Associate Professors*		*Assistant Professors*		*Instructors*		
	Number	*% of Total*	*Number*	*% of Total*	*Number*	*% of Total*	*Number*	*% of Total*	*Total*
				29 Privately Controlled					
1939-40	1419	34.0	735	17.6	1014	24.3	1009	24.1	4177
1949-50	1799	30.9	1238	21.2	1376	23.6	1417	24.3	5830
1957-58	2334	35.7	1404	21.5	1628	24.9	1170	17.9	6536
1959-60	2487	36.6	1497	22.0	1731	25.4	1089	16.0	6804
				5 Large State Universities					
1939-40	963	30.6	602	19.1	721	22.9	864	27.4	5150
1949-50	1584	27.2	1109	19.0	1542	26.4	1596	27.4	5831
1957-58	2393	34.0	1694	24.1	1654	23.5	1293	18.4	7034
1959-60	2557	34.7	1790	24.3	1848	25.0	1180	16.0	7375

there has been a tendency to up-grading as an aid in meeting the salary competition offered by other occupations, or both, our data do not reveal. Military service requirements, new since 1939, could mean that an instructor may be two, or even three, years older than formerly at first appointment. This circumstance may, in part, account for this trend, and, in time, can be expected to extend its influence beyond the rank of assistant professor into the two top ranks. Another material factor is the very considerable increase in the numbers of appointments reported on the 11-12 months basis. If we exclude these from the data for the state universities, the proportion for professors, for example, rises only 2 percentage points from 1939-40 to 1959-60, instead of the 4 percentage points indicated in Table 8. Similarly, if we exclude the 11-12 months appointments, the growth in the size of total instructional staff in the state universities is appreciably reduced, namely, from 134 per cent indicated by the totals in Table 8 to 112 per cent. One important factor in this growth in the number of 11-12 months appointments is the great increase in sponsored research projects conducted by the staff for government and business, and by foundation grants on a year-round basis. All in all, we would hesitate to adduce from the percentages shown in Table 8 an element of up-grading sufficient to invalidate the record of the changes in the mean salaries for each rank over the two decades as a measure of instructional salary adjustment. On this score, however, mean salaries shown for all ranks combined in Tables 2 and 4, for example, should be quite free from doubt, for they are directly influenced by the proportions of staff in each of the several ranks.

VIII. Ends and Means

Earlier in this report, we indicated that the instructional salary adjustments over the past two years in our selected institutions have been greater than in any preceding biennium in our record. In our thirty-three privately controlled institutions, the weighted mean salary, including annuity provisions, for all ranks combined on 9-10 months basis advanced from $8252 in 1957-58 to $9588 in 1959-60. On a cumulative basis, this is a rate of 7.8 per cent a year. Turning to the slightly smaller group of privately controlled institutions for which we have consonant data for 1939-40, we find the average rate of change was a little larger. In these twenty-eight colleges and universities, the mean for all ranks combined rose from $7875 to $9394—cumulatively, 9.2 per cent a year. In four large state universities, it went up from $8965 to $9659—cumulatively, 3.7 per cent a year. What do these rates of increase mean in terms of what is needed to sustain the functions of higher education in our nation at reasonably secure levels?

One quick test that may be used is that supplied by the President's Committee on Education Beyond the High School in its report of July, 1957. On the basis of a comprehensive review of the problems and issues, the Committee recommended "to every board of trustees, every legislature, and all others responsible for academic budgets":

(1) That the absolute highest priority in the use of available funds be given to raising faculty salaries, with the goal of doubling the average level within 5 to 10 years, and with particular attention to increasing the spread between the bottom and the top of each institution's salary structure;

(2) That action also be taken to provide at moderate cost such benefits as health and life insurance, adequate retirement programs, faculty housing, assistance for the education of faculty children, and similar measures whose costs to the institution are small compared to the benefits and attractiveness to faculty members.[11]

In the same report, the Committee also pointed out that, to maintain the competitive position of the profession, once it is restored, "would probably require by 1970 an average rise of 100 to 125 per cent above present [1957] faculty salary levels."

To reach the five- to ten-year goals recommended by the President's Committee as a countrywide average demands large annual rates of change—so large that substantial

[11] *Op. cit.*, p. 6.

salary increases can hardly be postponed to ultimate or penultimate years. For the ten-year goal, a cumulative average rate of increase of 7 per cent a year must be maintained, and to reach it in a shorter time, a correspondingly higher rate is needed. By the aggregated percentages cited above, our privately controlled institutions show a rate of increase in the latest biennium somewhat larger than the essential 7 per cent, while the four large state universities fall below this cumulative rate.

To indicate how moderate are the goals set by the President's Committee, compare the salary levels in our particular group of institutions with nationwide income distribution data for 1941 and for 1957. Using these data, we have prepared rough estimates of the salaries needed in 1959-60 to restore the persons now in each of the four academic ranks to the same relative position in the family income distribution that persons of similar rank in the same institutions had in 1941 (Table 9). The use of the 1941 family income distribution as a base, as was noted earlier in this report, understates the relative position of instructional salaries in 1939. We made no attempt to adjust for this understatement because the 1941 distribution is largely free from the effects that unemployment might have had on the 1939 distribution—thus being a conservative estimate—and can be considered essentially consistent with the distribution of present-day, full-employment incomes. Moreover, use of the 1957 income distribution also involves some understatement with respect to the relative requirements for instructional salaries in 1959-60. Although these estimates have been adjusted for the 3 per cent increase in prices between September, 1957 and September, 1959, they ignore the greater increase in personal income (9 per cent) during this biennium.

The estimates in Table 9 indicate that 1959-60 salaries in the several ranks would need to be 16 to 30 per cent higher than those currently reported, and 26 to 47 per cent higher than those reported for 1957-58, to restore the profession to its 1941 relative position. When all ranks are combined and the average requirements computed, it is found that salary increases of 29 per cent over 1959-60, and 45 per cent over 1957-58, would be required to accomplish this end.

When we look ahead to 1967-68, that is, to the ten-year goal set by the President's Committee, we must make some allowance for further price and income changes. If the level of prices increases by 13 per cent in the next eight years, as it has increased in the past eight years, and if there is a continued growth in personal income, then a doubling of 1957-58 academic salaries by 1967-68 might approximate the amounts required to restore the profession to the relative level it had in 1941. In these terms, the salary goals of the President's Committee do not appear unreasonable.

Three considerations deserve mention in relation to this use of the family income distributions as appropriate bench marks. First, those distributions reflect better than other figures the tendency often noted during postwar years for salaries at the lower levels to increase faster than those near the top. They thus provide a better perspective for gauging the relative position of the salaries in each of the academic ranks than does either the change in price levels, which ignores the growing productivity of the economy, or the change in per capita personal income, which gives full weight to increasing productivity. As Table 2 shows, academic salaries have just about caught up with the rise in price levels. The 1959-60 salaries of instructors are, by this measure, about 15 per cent ahead of price changes. However, as can be inferred from the starting salaries offered college graduates by business and industry in 1958-59 (p. 38, above), and as is shown clearly in Table 9, instructors' salaries have deteriorated relatively over the past two decades. Yet they cannot be counted to have deteriorated as much as might be suggested in comparing them simply with the growth of productivity in the economy. Similarly, at the professorial level, the mean salary required to restore the 1941 relative position is significantly less than that indicated by a measure

TABLE 9—*Weighted Mean Salaries, including Institutional Contributions to Retirement Annuities, 1939-40, 1957-58, 1959-60, and Those Needed to Restore Instructional Staffs to 1941 Relative Income Position, by Academic Rank and All Ranks Combined*

32 Institutions

(9-10 months basis only)

	Mean Salary			*Percentile (from top) of 1939-40 Mean Salary in 1941 Family Income Distribution*	*Estimated Mean Salary Required in 1959-60 for same Percentile as in 1941*
	1939-40	*1957-58*	*1959-60*		
Professor	$5895	$11,575	$13,014	4.0	$17,000
Associate Professor	4146	8,399	9,318	8.4	12,000
Assistant Professor	3274	6,628	7,371	16.1	9,500
Instructor	2274	5,245	5,681	35.0	6,600
All Ranks Combined	4054	8,487	9,510	—	12,300*

* Weighted average of individual ranks. The numbers in each rank for 1959-60 for the 32 institutions were used as weights.

Sources: Mean salaries for 1939-40, 1957-58, and 1959-60 are from data for Appendix Table II. The percentiles for 1939-40 mean salaries are estimated by linear interpolation from the distribution of family incomes for 1941 in "Size Distribution of Income Since the Mid-Thirties," by Selma Goldsmith, George Jaszi, Hyman Kaitz, and Maurice Liebenberg, *Review of Economics and Statistics*, Vol. 36, February 1954, p. 4. The mean salary required for 1959-60 to achieve the same percentile was estimated from the distribution of family income prepared by the Department of Commerce, *Survey of Current Business*, July, 1959. These estimates were then adjusted for the increase since 1957 in the Consumer Price Index prepared by the Bureau of Labor Statistics. In arriving at the required income for professors, we used the 1956 family income distribution to estimate the shape of the distribution in the income range of $15,000—$19,999 in 1957.

that takes full account of productivity gains. Secondly, personal income distributed among families includes employer (but not employee) contributions for retirement, as do the academic salaries discussed in these comparisons. Arrangements for retirement have become widespread during recent decades and are taken into account in this report, although most statistical information on the income of particular occupations omit them. Since these contributions vary widely, comparisons that include them on one side, but not on the other, can be seriously affected. Thirdly, although the groups which have gained relatively cannot be identified in the family income distributions, our concern, particularly with respect to the three professorial ranks, has been with the top end of the distribution which is heavily weighted with professional incomes.[18]

The cost of the increases needed to bring salaries up to the levels needed in 1959-60, as indicated in Table 9, will require much larger instructional budgets in these colleges and universities. For the present number of full-time staff on the 9-10 months basis in these thirty-two institutions—some 11,788 persons—it would require an additional sum of about $32,000,000, that is, 29 per cent more than is spent this year on this sector of staff. Faculty on the 11-12 months basis would add another $6,000,000, and part-time instructors and assistants another $4,000,000 or so. Altogether, the cost of appropriate salaries for the academic year 1959-60 would add about 38 per cent to the current instructional budgets in this group of institutions.

By what processes can the additional funds be channeled to the uses of higher education? Can it be primarily by existing means—by tuition fees charged to students at the privately controlled institutions, by taxes and tuition fees at the state supported institutions, by federal grants and aids, and by alumni giving and other forms of corporate grants and private philanthropy? Income from all these sources has grown greatly in recent years, and can be expected to continue to grow. But, even though there have been massive increases in tuition rates since the war in the privately controlled colleges and universities, and huge increases in state appropriations, instructional salaries have not yet been restored to appropriate levels. The privately controlled institutions are in a particularly difficult situation. Tuition fees among our selected group now range, according to their latest bulletins, from $750 in the South and North Central area to $1450 in the East. The average (unweighted) tuition fee in thirty-one privately controlled institutions is $1090, and several have already announced further increases effective in the next academic year. Their rates are already five to ten times those for in-state students in state supported institutions. It should not be overlooked that a substantial part of the yield of each tuition increase has to be devoted to enabling the abler students of limited means to continue in college.

Tuition fees have become the chief resource of privately controlled institutions struggling with swelling costs. Beardsley Ruml, recently making several major proposals intended to promote recruitment of competent staffs (including salaries to range into the $20,000 to $30,000 category), and designed to cope with rising enrollments without substantially increasing costs,[19] has suggested that tuition fees should be applied mainly to instructional salaries. "Trustees . . . should set a goal percentage which will be something to shoot at," and "whether the figure is 70 per cent or 80 per cent of tuition income" devoted to faculty compensation for teaching services, it should be "somewhat higher than recent experience." "Achievement of 100 per cent ratio in a reasonable period of time . . . is a goal worth setting." Scholarship aid, administration, research appointments, and so on, should be more largely dependent on other funds. A defined goal, Mr. Ruml argues, would stimulate more effort to raise funds from other sources and be a "strong restraint on the creeping expansion of administrative expense of all kinds." While "not a precise index of educational efficiency, since even a 100 per cent ratio can be frittered away in low student-teacher ratios without building faculty quality . . . broadly speaking, a ratio of 50 per cent (of tuition devoted to teaching salaries) must be regarded as an indication of doubtful educational merit and 60 per cent as only a little better."[20]

There is logic in this proposal. Is there much room for reform among our selected institutions today? Comparing their tuition charges with their instructional salaries per student—a measure which includes part-time faculty, annuity contributions, and the reading assistants and section instructors that Mr. Ruml does not clearly allow for in his models designed to illustrate the feasibility of a 20:1 student-faculty ratio—we find that only two of our institutions now fall in his "doubtful educational merit" category (taking it as under 60 per cent), and that some spend over 100 per cent of tuition fees on instruction—even as much, in one case, as 159 per cent. The average (unweighted) proportion of tuition fees spent on instruction in thirty-one of the privately controlled institutions on our selected list is 80 per cent. Something may be done to raise the student-faculty ratio in some of our schools where it is particularly low (as we have suggested in earlier reports), and other economies may, no doubt, be effected without harm to quality; but, for our selected group of institutions, the major hope is for new funds, whether from higher tuition fees or from other sources. Much

[18] On the basis of 1957 income data, families in which heads-of-households were classified (as of March, 1958) as professional and kindred workers, including the self-employed professional workers, constituted 18 per cent of all families with money incomes of $7000 or more, and 25 per cent of those with money incomes of $10,000 or more. *Current Population Reports, Consumer Income,* Bureau of the Census, Series P-60, No. 80, December, 1958, p. 24.

[19] *Memo to a College Trustee: A Report on Financial and Structural Problems of the Liberal Colleges,* by Beardsley Ruml and Donald H. Morrison (who wrote Part 4, "Achievement of the Possible"), McGraw-Hill, New York, 1959.

[20] *Ibid.,* pp. 12-13.

larger contributions are needed from alumni, from business and industry that have developed such large demands for college trained personnel, and from government, including the federal government, for this is a matter of increasing concern to the national welfare.

Federal aid might be developed in a highly beneficial way. One can conceive of a vast scholarship program that recognized the total costs of education and selected the student recipients through competitive examinations on a nationwide basis, thus giving a great stimulus to competitive scholarship. Through such a program, the government could make a substantial contribution to the financing of higher education in our inflationary and expanding society while assuring that really able young people would not be deterred or excluded by the high tuition fees that are coming to prevail. The program would relieve the privately controlled institutions of some of the burden they now carry in helping to finance students of limited means—and the provisions need not be inequitable for the state supported universities chosen by the students awarded scholarships. At the same time, it should promote a fuller utilization of our human resources. Among the two-thirds of the age group who do not now go to college, there are almost certainly many of high capacity who are excluded by lack of funds. We are rapidly becoming, in the phrase of the *Second Report to the President,* a "society of students". But we have not yet fully tapped our reservoirs of talent.

By Subcommittee Z-1 on Biennial Salary Study:

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APPENDIX TABLE I—*Weighted Mean Salaries and Numbers of Full-time Appointments in Report Years 1939–40 to 1959–60 by Rank, Region, and Size or Type of Institution*

39 Institutions, 1948-49 to 1959-60 | *34 Institutions, 1939-40 to 1959-60*

Region, Size or Type, and Academic Year	*Professors* No.	*Professors* Mean Salary	*Associate Professors* No.	*Associate Professors* Mean Salary	*Assistant Professors* No.	*Assistant Professors* Mean Salary	*Instructors* No.	*Instructors* Mean Salary
PRIVATELY CONTROLLED COLLEGES AND UNIVERSITIES (9-10 months basis except as noted)								
New England and Middle Atlantic								
I. Four Small								
1939-40	108	$ 5,941	42	$4137	58	$3348	54	$2395
1948-49	113	6,650	52	4957	92	4115	61	3269
1953-54	126	8,042	66	5989	75	4728	83	3967
1955-56	133	8,768	65	6499	89	5013	83	4229
1957-58	133	9,969	72	7531	106	5818	72	4754
1959-60	144	11,806	72	8563	132	6530	68	5441
Six Small								
1948-49	167	$ 6,540	74	$5058	134	$4135	94	$3074
1949-50	172	6,762	74	5180	144	4165	90	3261
1951-52	179	7,664	86	5836	114	4735	94	3703
1953-54	184	7,947	87	6035	112	4807	113	3968
1955-56	188	8,594	96	6487	138	5086	117	4228
1957-58	197	9,823	98	7440	164	5905	105	4736
1959-60	201	11,544	103	8477	190	6529	86	5407
II. Five Medium								
1939-40	225	$ 5,977	179	$4128	223	$3051	173	$2119
1948-49	329	7,075	196	5360	268	4205	232	3231
1949-50	338	7,113	206	5425	271	4254	223	3301
1951-52	362	7,438	197	5756	234	4488	179	3487
1953-54	398	8,039	197	6223	241	4854	179	3779
1955-56	405	9,159	221	7003	307	5288	205	4084
1957-58	450	10,081	237	7430	299	5910	230	4850
1959-60	432	12,085	241	8503	300	6638	209	5372
III. Three Large								
1939-40	341	$ 7,163	98*	$5510*	241	$3669	279	$2337
1948-49	420	8,656	168*	6309*	269	4533	318	3195
1953-54	495	9,786	178*	7010*	269	5178	310	3824
1955-56	527	10,071	214*	7268*	306	5394	341	4047
1957-58	549	11,013	256*	7777*	316	5877	327	4592
1959-60	607	12,192	242*	8465*	356	6522	322	5272
Five Large								
1948-49	686	$ 8,786	400	$5892	495	$4504	523	$3114
1949-50	715	8,782	408	5895	398	4477	481	3180
1951-52	765	9,367	415	6282	388	4689	457	3348
1953-54	797	10,010	409	6756	432	5150	476	3762
1955-56	852	10,174	460	7045	496	5438	524	4032
1957-58	873	11,336	502	7762	498	5977	452	4660
1959-60	980	12,917	500	8552	559	6745	467	5362

* Two institutions.

APPENDIX TABLE I—*continued*

Region, Size or Type, and Academic Year	Professors No.	Professors Mean Salary	Associate Professors No.	Associate Professors Mean Salary	Assistant Professors No.	Assistant Professors Mean Salary	Instructors No.	Instructors Mean Salary
IV. Two Women's								
1939-40	62	$ 4,886	44	$3509	55	$2908	35	$2080
1948-49	70	6,040	56	4597	36	3683	51	2912
1953-54	78	7,346	48	5619	50	4742	58	3747
1955-56	75	7,493	48	5677	49	4878	68	3900
1957-58	87	8,708	47	6481	53	5528	63	4508
1959-60	87	9,845	58	7307	57	6075	57	49[illegible]
Three Women's								
1948-49	114	$ 5,953	90	$4618	67	$3703	98	$2926
1949-50	109	6,046	89	4601	75	3736	94	2966
1951-52	109	6,511	84	5064	76	4180	90	3315
1953-54	115	7,286	81	5677	88	4664	94	3746
1955-56	112	7,625	81	5928	76	5012	116	3915
1957-58	123	8,948	84	6898	76	5653	109	4574
1959-60	131	10,333	86	7684	83	6333	101	5276
North Central and Pacific								
V. Five Small								
1939-40	78	$ 3,855	46	$2876	37	$2534	62†	$1938†
1948-49	92	5,303	69	4188	88	3492	49†	2890†
1949-50	92	5,348	75	4251	82	3642	58†	3056†
1951-52	87	5,915	73	4658	76	3918	38†	3338†
1953-54	86	6,378	65	5216	87	4260	42†	3639†
1955-56	80	6,772	65	5684	109	4584	50†	3930†
1957-58	98	7,983	76	6322	112	5321	52†	4545†
1959-60	101	9,623	97	7310	101	5969	66†	5185†
VI. Four Medium and Large								
1939-40	254	$ 5,386	130	$3748	151	$2913	146	$2070
1948-49	374	7,079	275	5334	307	4272	287	3252
1949-50	382	7,270	297	5405	307	4388	269	3403
1951-52	406	7,575	295	5655	292	4565	215	3763
1953-54	408	8,099	292	6054	278	4905	214	3877
1955-56	462	8,554	314	6434	296	5277	187	4098
1957-58	516	9,834	331	7256	315	5881	201	4526
1959-60	578	11,498	358	8382	340	6707	153	5220
South								
VII. Four Medium and Large								
1939-40	175	$ 4,815	53	$3588	116	$3081	127	$2186
1948-49	201	6,011	141	4761	168	4022	151	3125
1949-50	207	6,272	143	4911	186	4126	147	3244
1951-52	228	6,607	152	5175	189	4372	107	3511
1953-54	198	7,255	145	5758	202	4803	109	3775
1955-56	217	8,018	199	6241	221	5076	120	4040
1957-58	236	8,991	205	7122	208	5789	111	4473
1959-60	276	10,364	238	7938	224	6633	122	5071
New England and Pacific								
VIII. Two Institutes of Technology (10, 10½, or 11-12 months basis)								
1939-40	128	$ 6,292	109	$4271	100	$3095	93	$1947
1948-49	163	9,256	143	6836	135	5439	106	3794
1949-50	161	9,309	143	6799	135	5421	112	3850
1951-52	181	9,316	151	6706	158	5171	..	....
1953-54	205	10,229	172	7448	162	5567	74	4099
1955-56	196	10,511	173	7573	185	5656	61	4055
1957-58	236	11,309	198	8250	213	6467	99	4903
1959-60	248	13,593	191	9194	221	6664	87	5172
PUBLICLY SUPPORTED UNIVERSITIES								
North Central and Pacific								
IX. Five Large State Universities (9-10 months basis only)								
1939-40	888	$ 5,162	529	$3624	648	$2940	787	$2187
1948-49	1093	7,248	713	5370	1086	4376	1500	3264
1949-50	1283	7,666	879	5658	1256	4567	1436	3539
1951-52	1269	8,363	875	6201	1104	5020	895	4010
1953-54	1404	9,173	958	6687	1267	5400	903	4262
1955-56	1553	9,706	1103	7015	1376	5585	934	4482
1957-58	1893	11,259	1354	8039	1315	6396	1118	5137
1959-60	1995	12,055	1472	8695	1538	6949	1034	5290

† Four institutions.

APPENDIX TABLE II—*Weighted Mean Salaries Plus Institutional Contributions to Retirement Annuities by Rank and by Group of Institutions*

29 Privately Controlled Institutions, 1939-40, 1957-58, and 1959-60
34 Privately Controlled Institutions, 1957-58 and 1959-60
4 Large State Universities, 1939-40, 1957-58, and 1959-60

(9-10 months basis except as noted)

	Professors		*Associate Professors*		*Assistant Professors*		*Instructors*	
	Total Amount $	*Annuities: Percent of Base Salary* %	*Total Amount* $	*Annuities: Percent of Base Salary* %	*Total Amount* $	*Annuities: Percent of Base Salary* %	*Total Amount* $	*Annuities: Percent of Base Salary* %
PRIVATELY CONTROLLED INSTITUTIONS								
New England and Middle Atlantic								
Four Small								
1939-40	6,239	5.00	4344	5.00	3516	5.00	2518	5.00
1957-58	10,926	9.60	8230	9.29	6362	9.35	5250	10.43
1959-60	12,992	10.05	9402	9.80	7271	11.35	5989	10.07
Six Small								
1957-58	10,824	10.19	8188	10.05	6518	10.47	5199	9.78
1959-60	12,761	10.51	9382	10.68	7300	11.81	5929	9.62
Five Medium								
1939-40	6,187	5.00	4335	5.00	3184	4.36	2176	2.69
1957-58	11,301	12.10	8307	11.68	6548	10.80	5285	8.97
1959-60	13,716	13.50	9481	11.50	7369	11.01	5763	7.28
Three Large								
1939-40	7,521	5.00	5785*	5.00*	3853	5.00	2407	3.00
1957-58	11,788	7.04	8322*	7.01*	6321	7.55	4796	4.44
1959-60	13,479	10.56	9455*	11.70*	7281	11.59	5621	6.62
Five Large								
1957-58	12,304	8.54	8424	8.53	6519	8.70	4898	5.11
1959-60	14,334	10.97	9486	10.92	7530	11.64	5767	7.59
Two Women's								
1939-40	5,130	5.00	3685	5.00	3037	4.44	2163	3.99
1957-58	9,702	11.41	7245	11.79	6232	12.74	5110	11.14
1959-60	11,159	13.35	8319	13.85	6952	14.44	5697	14.31
North Central and Pacific								
Five Small								
1939-40	3,982	3.29	2940	2.23	2605	2.80	1972†	1.60†
1957-58	8,912	7.60	6711	7.10	5719	7.48	4788†	5.35†
1959-60	10,538	9.51	7991	9.32	6566	10.00	5534†	6.73†
Four Medium and Large								
1939-40	5,736	6.50	3992	6.51	3090	6.08	2117	2.27
1957-58	10,928	11.12	8047	10.90	6500	10.53	4856	7.73
1959-60	12,700	10.45	9247	10.32	7360	9.74	5656	8.35
South								
Four Medium and Large								
1939-40	5,035	4.57	3873	5.00	3220	4.51	2224	1.74
1957-58	9,616	8.06	7617	6.95	6197	7.05	4634	3.60
1959-60	11,113	7.23	8479	6.82	7109	7.18	5360	5.70
New England and Pacific								
Two Institutes of Technology (10 and 11-12 months basis)								
1939-40	6,606	5.00	4484	5.00	3250	5.00	2044	5.00
1957-58	12,382	7.59	8895	7.82	6975	7.86	5274	7.57
1959-60	14,680	8.00	9941	8.12	7205	8.12	5590	8.08
All Regions Combined								
28 Privately Controlled Institutions Aggregated (9-10 months basis only)								
1939-40	6,166	4.91	4349	4.75	3345	4.90	2237	2.95
1957-58	11,039	9.38	8095	9.11	6402	9.03	4967	6.89
1959-60	12,845	10.56	9129	9.98	7203	10.21	5638	7.63
33 Privately Controlled Institutions Aggregated (9-10 months basis only)								
1957-58	11,266	9.62	8146	9.15	6460	9.27	4991	6.99
1959-60	13,204	10.76	9192	10.07	7290	10.42	5703	7.81

* Two Institutions.
† Four Institutions.

APPENDIX TABLE II—*continued*

	Professors		*Associate Professors*		*Assistant Professors*		*Instructors*	
	Total Amount $	*Annuities: Percent of Base Salary* %	*Total Amount* $	*Annuities: Percent of Base Salary* %	*Total Amount* $	*Annuities: Percent of Base Salary* %	*Total Amount* $	*Annuities: Percent of Base Salary* %
PUBLICLY SUPPORTED UNIVERSITIES								
North Central and Pacific								
Four Large State Universities (9-10 months basis only)††								
1939-40	5,334	5.98	3789	6.05	3100	6.13	2355	6.42
1957-58	12,316	8.06	8764	8.08	6961	8.16	5588	7.92
1959-60	13,244	8.98	9518	8.94	7589	8.96	5737	9.19

†† Mean values of institutional contributions to retirement funds are approximate and in a fifth university the provisions are too complex to be computed for this purpose.